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TRENDS IN ECONOMIC GROWTH

A COMPARISON OF THE WESTERN POWERS AND THE SOVIET BLOC

A STUDY PREPARED FOR THE

JOINT COMMITTEE ON THE ECONOMIC REPORT

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LETTERS OF TRANSMITTAL

JANUARY 3, 1955.

To Members of the Joint Committee on the Economic Report:

In its report to the Congress last February (H. Rept. 1256, 83d Cong., 2d sess.), the committee stated that "a thoroughgoing study of long-run economic trends in the areas of the world under the influence of Communist ideologies and in the remainder of the world would be undertaken." The committee staff was directed to survey the problem.

The study, Trends in Economic Growth: A Comparison of the Western Powers and the Soviet Bloc, transmitted herewith, was prepared at the committee's request by the Legislative Reference Service of the Library of Congress in cooperation with the committee staff. We are grateful to the Legislative Reference Service for completing this study in such a short time. We appreciate that this should be considered an interim report and that the committee will want to continue to study economic trends on both sides of the Iron Curtain.

It is understood, of course, that this study does not necessarily represent the views of the committee or any of its individual members.

JESSE P. WOLCOTT,
Chairman, Joint Committee on the Economic Report.

JANUARY 3, 1955.

Hon. JESSE P. WOLCOTT,
Chairman, Joint Committee on the Economic Report,
United States House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: There are few significant problem areas in which legislation enacted by the United States does not affect, or is not affected by, the relative economic positions of this country, the other countries of the free world, and the countries of the Communist bloc. It is of the utmost importance, therefore, that the United States Congress and the American people be fully aware of the trends, so far as they can be established, in the economic growth of the countries on both sides of the Iron Curtain.

In the struggle between the Communist bloc and the free world, the factor of relative economic strength is fundamental. Neither morale nor political stability nor a firm military posture can long be sustained in its absence. A clear understanding of this fact led the United States to enact the Marshall plan and allied measures to rehabilitate the war-torn economies of its friends, particularly in Europe. These efforts have cost the American people many billions of dollars, but they have sparked an economic revival in most of independent Europe and in a number of other areas. Nevertheless, the job is far from finished. In some countries of vital interest to the United States, marked economic weakness is still evident. Many others have

specific problems, such as the shortage of energy resources, solutions to which require initiative and sacrifice on the part of the peoples of the countries themselves. In some cases, solutions could be developed most effectively with American cooperation.

Above all, sight must not be lost of the intense, continuing efforts of the Soviet Union to maximize production within its own borders and within those of the captive countries of Europe. It is thus not enough to have recovery in the free world. A continued, dynamic economic growth, matching or surpassing that of the Communist bloc, would seem to be indispensable for the maintenance of world stability and as a force for world peace. In its recent report, Potential Economic Growth of the United States During the Next Decade, the committee staff outlined the tremendous opportunities for expansion of production and living standards in the United States. These potentials must be realized.

The rates of progress achieved by the leading economies of the West and the East, and the methods used to realize such progress, are being watched today by the less developed countries of the world. The past 50 years, and especially the period since World War II, have seen an awakening of keen desire for rapid economic progress on the part of numerous nations and dependent areas in Asia, Latin America, and Africa.

Furthermore, in many of these nations medical advances have sharply increased the rate of population growth, by lowering mortality. In consequence, the search for heightened productivity and greater output in both agriculture and industry has taken on new and extreme urgency. Under these circumstances, it is scarcely surprising that the rapid industrialization of the Soviet Union exercises a great fascination in some quarters, albeit such industrialization is paid for by the Soviet bloc at an exorbitant price in terms of human lives and freedom. To show that economic progress can be achieved without recourse to totalitarianism is a moral and practical obligation of the West.

Finally, the economic well-being of the United States, regardless of the conflict with communism, is inextricably intertwined with that of the rest of the world. The lesson of the European prelude to the great depression in the United States must never be forgotten. And only an expanding world economy can provide the raw materials and the markets which the United States will need, with greater population and less balanced resources, in future years.

For these reasons, the Joint Committee on the Economic Report, realizing the great importance of as accurate an assessment as possible of comparative economic trends, directed its staff to survey the problem of East-West economic trends. In its report of February 26, 1954 (House Rept. 1256, 83d Cong., 2d sess., p. 17) it said:

> The committee believes that a thoroughgoing study of long-run economic trends in the areas of the world under the influence of Communist ideologies and in the remainder of the world should be undertaken. The outcome of the clash between East and West will in large part be dependent upon productivity advances and relative standards of living. A comparison of the success of the two systems in meeting the ultimate need for consumers' goods and a careful reexamination of the impediments to economic growth in the western countries should throw considerable light on the problem of long-run economic stability in this country. The committee staff is directed to survey this problem during the coming year.

The purpose of this report is to summarize the essential known facts bearing upon the comparative rates of economic growth of the United States and independent Europe, on the one hand, and of the Soviet Union and the captive states on the other. (The captive states are sometimes called the satellite countries. They include Albania, Bulgaria, Czechoslovakia, Hungary, Poland, Rumania, and East Germany. The term "Communist bloc" is included in the glossary only for the purpose of making clear the region to which that term refers when it is used in the text.)

The study examines the changes in total economic activity, in the availability of resources, in structure and organization, and in the economic interrelations of these countries over the period 1938 through 1953. It indicates outstanding current problems and, where possible, the orders of magnitude of probable growth to 1970.

The focus of this study on Europe in no sense denies the importance of thoroughgoing analysis of the economies of other parts of the world, namely, Asia, Africa, Australasia, and Latin America. But Europe is an indispensable starting point. The countries surveyed, the United States, those of Europe, and the Soviet Union, embrace the great bulk of the world's industrial capacity, and virtually all the world's exportable surpluses of capital and technological skills. Hence, the progress of other portions of the world is substantially dependent upon the actions of these wealthier nations. Furthermore, independent Europe has been the testing ground of American programs of economic aid and cooperation, while captive Europe has been a principal arena of Soviet postwar imperialism.

Finally, the statistics available for the areas herein under study, although far from satisfactory in many ways, are substantially better than those extant for most other parts of the world. In consequence, less uncertainty surrounds the discernment of rates of economic growth or of structural change than would be the case in the study of most other areas.

The present study is subject to certain limitations. In the first place, time and available resources have precluded exhaustive research. Primary reliance has had to be placed upon available summaries by official and international bodies. These data, unfortunately, have proved deficient in many instances. A number of critical gaps have been filled by new research, in cooperation with various agencies of the executive branch. This has been particularly so with regard to the national accounts of the countries of Eastern Europe. Other important gaps remain. For example, on no country of the Danubian basin (except Austria) has satisfactory national accounts information been discovered. Again, comprehensive, analyzed information on the economic aspects of education, research, and development is lacking for almost all countries; also lacking is a serious comparative evaluation of the impacts of different systems of incentives and controls upon economic development. Thus, this study is primarily exploratory.

Second, available statistical information, although better than in other areas, is subject to considerable error. Even in the West, dif-

ferences in definition, coverage, and statistical technique impose serious difficulties upon those seeking to make comparisons between countries, and over periods of time. For the Soviet Union and the captive countries, these difficulties have been compounded, not only by the concealment of data, but also by the Soviet use of selective, distorted, or even false figures as an instrument of cold war. (See Stuart Rice et al.: Reliability and Usability of Soviet Statistics. The American Statistician, April-May, June-July 1953, and the attached staff paper, Soviet Statistics as an Instrument of Propaganda.) Extreme care must be exercised in order to avoid confusion between statements of goals or claims of accomplishment, on the one hand, and actual performance, on the other.

Third, integration of the information on the various countries and groupings of countries has involved many problems of economic theory, some still unsolved. The concept of economic growth is exceedingly complex, and there is no single index that can be used to measure it. Furthermore, economies are integrated phenomena, in which interrelationships are often more important than absolute magnitudes. Because of limitations of time, only a few of these interrelationships have been traced. Neither has time permitted an adequate examination of the institutional characteristics of the economies under study. Much more analysis based upon reasonably complete economic models needs to be done.

Fourth and finally, the economic factor is only one dimension of national strength and cohesion, and it is to this factor that the present study is confined. No consideration has been given to problems of military potential or to those of economic mobilization. Resistance or susceptibility to political and psychological infiltration, and armed forces in being also fall outside the scope of the survey. For these reasons, it must not be considered as a series of vest-pocket estimates of national potential. Its role is much more modest. It is an introduction to an examination of the trends in the economic growth of the United States, of Western Europe, and of the countries comprising the Soviet bloc.

The main findings of the report are brought together in the section entitled "Summary and Conclusions," and in the summary tabulations. Following these sections are the main chapters which, in turn, are supplemented by the staff papers in which supporting details will be found.

The departments and agencies of the executive branch of the Government have been most helpful in making available for consultation and review their many specialists on the subjects covered. Neither they, nor the individuals concerned, however, are responsible for any of the interpretations contained herein. To thank each person who rendered assistance by name is not feasible.

This study was prepared under the immediate direction of Howard S. Piquet, senior specialist in international economics of the Legislative Reference Service. Assisting on the study, all from the Legislative Reference Service, were Elden E. Billings, Mary R. Heslet, Halford L. Hoskins, Armand S. Miller, Jr., and John Kerr Rose. Demitri B. Shimkin, whose services the Bureau of the Census generously made available, prepared sections of the report and acted as adviser to the project. Sergius Yakobson, Chief of the Slavic and

East European Division of the Library of Congress, also served in an advisory capacity, as did K. E. Olsoni, of the Library staff.

The services of Abram Bergson, of Columbia University, and Gregory Grossman, of the University of California, in reading the report in its final stages are deeply appreciated. Even though they had to do the job hurriedly their suggestions have been most helpful.

The committee staff expresses its deepest appreciation to Ernest S. Griffith, Director of the Legislative Reference Service, for effectively organizing the resources of the Service to meet the need for this report in the brief period between July and December 1954. Because of the speed with which it has been prepared it should be considered as an interim report.

GROVER W. ENSLEY, *Staff Director,*
Joint Committee on the Economic Report.

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GLOSSARY

The free world	All countries not in the Communist bloc.
The West	Independent Europe plus the United States; Canada is included when specifically mentioned.
Independent Europe	Western Europe plus Spain, Finland, Yugoslavia, and West Berlin.
Western Europe	The European members of the Organization for European Economic Cooperation (OEEC): Austria, Belgium, Denmark, France, Federal Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Saar, Sweden, Switzerland, Trieste, Turkey, United Kingdom. Subgroupings, such as the European Coal and Steel Community, are defined when they appear.
Communist bloc	Soviet bloc plus China, Mongolia, North Korea, and Vietminh.
Soviet bloc	Soviet Union plus captive Europe.
Captive Europe [1]	The 7 so-called satellites of the Soviet Union: Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland, and Rumania.

Minor exceptions in this terminology are noted in the text when they appear.

[1] The term as used here includes only those countries to which the Soviet Union has conceded a nominal nation status. This is not intended to overlook those captive states and peoples within the present claimed juristic orbit of the Soviet Union itself, such as the Baltic States, the Ukraine, etc. These latter do not at present constitute economic entities lending themselves to separate statistical treatment.

TRENDS IN ECONOMIC GROWTH

A Comparison of the Western Powers and the Soviet Bloc

Summary and Conclusions

I. *The present economic capacity of Western Europe, the United States, and Canada is significantly greater in terms of absolute magnitudes, diversity, and flexibility than the combined strength of the Soviet bloc. This conclusion emerges from comparisons of statistics relating to such basic indexes of economic strength as manpower, agriculture, steel capacity, transportation, and power potentials.*

1. Although the *population* of the United States and Western Europe is larger than that of the Soviet bloc [1] and although it increased more rapidly than the latter in the period 1938–52, current and prospective changes in its age structure are less favorable. However, in recent years output per worker in the United States and Western Europe has been increasing more rapidly than in the Soviet bloc.

2. Inadequate output and low productivity per man in *agriculture* are major restraints upon economic development in the Soviet bloc. They are also significant restraining factors in France and the Mediterranean countries, but not in northwestern Europe nor the United States.

3. In neither the Soviet bloc nor the Western countries do shortages of *minerals* appear to be limiting factors to economic growth so long as certain scarcer items can be obtained from outside. Their geographical distribution and often their quality are better in the West than in the East.

4. Although the Soviet Union has done a remarkable job in increasing its *steel* capacity, it has not been able to surpass the production record of the Western countries, notwithstanding primary emphasis in this sphere. Tonnage of steel produced in the Soviet Union continues to grow at about the historical rate in the United States 40 years earlier.

5. Generally speaking, Western Europe *appears to be* faced with a relative *power* shortage, arising *primarily* from difficulties in the rapid expansion of coal output, *plus some tightness in generating capacity. There is evidence of increased demand for fuel in liquid forms.* Atomic power, if it were to be systematically developed by either Western Europe or the Soviet bloc at relatively low cost, could alter the economic balance between the two areas quickly.

6. Tremendous distances separate resources, manufacturing capacity, and consumption centers in the Soviet bloc. In consequence, the transportation requirements of the Soviet Union and the captive countries, relative to national product, are greater than those of other powers. They have been met principally by intensive use of rail capacity.

[1] In this report the term "Soviet bloc" refers to the Soviet Union and the captive countries of Eastern Europe. See glossary for definitions.

The Soviet bloc does not have the diversity of means of transportation at present possessed by the Western countries, and is notably weak in shipping.

II. *In the period 1938–53, as a whole, the national product of the United States increased about three times as rapidly as that of independent Europe, and almost twice as rapidly as that of the Soviet Union. To a substantial degree, this difference reflects the varying effects of World War II. Between 1948 and 1953 the national product of the United States grew not quite 30 percent faster than that of independent Europe, and only two-thirds as fast as that of the Soviet Union.*

1. In the United States, the period 1938–44 was marked by the liquidation of unemployment and by the more intensive use of industrial capacity, as well as by low investment and marked resource depletion. Substantial investment since the end of World War II, including the development of new resources (domestic and foreign), not only consolidated wartime gains but set up favorable conditions for further growth, although at a slower rate.

2. In the Soviet Union, the period 1938–53 was characterized by both unfavorable and favorable circumstances. The Soviet Union suffered heavy war losses in terms of human life and capital resources. Between 7 million and 10 million persons were killed, or died, in the armed forces alone. Metallurgy was hit with special severity, with 60 percent of the prewar steel and aluminum capacities destroyed or damaged. In agriculture nearly half the horses and one-seventh of the cattle were lost.

Counterbalancing these losses, to a varying degree, was the territorial expansion of the Soviet Union. Also, it increased its labor input through the lengthening of the workweek from a prewar 40 hours to a postwar 48 hours, through the more extensive employment of women, and through the conscription of 14- to 17-year-olds. It gained technologically through the free access of thousands of Soviet engineers to American industrial know-how; and it has enjoyed extremely large capital and raw material transfers, through lend-lease and through booty or tribute from its captive states. In 1944 alone, more than a quarter of the entire mineral consumption of the Soviet Union came from lend-lease.

3. The war inflicted heavy human and material losses upon Western Europe also. Economic recovery after 1947 was rapid, in large part owing to the Marshall plan and other mutual assistance programs.

4. For these reasons, while no comparison between nations and through time is absolutely "fair," the period considered is probably no "worse," or no "better," than others. The important fact is that past trends, by themselves, are poor guides to the future. Forecasts, if attempted, should be based upon concrete structural analysis.

III. *An examination of the various factors of production (growth of labor input, agriculture, housing, etc.) in the United States and in the Soviet Union today gives strong grounds for expecting that the* absolute *gap in the size of the 2 economies will widen over the next 2 decades, although the* rate *of growth in the Soviet Union might be somewhat higher than the* rate *of growth in the United States.*

IV. *Economically, Western Europe has been growing somewhat more slowly since 1938 than has the Soviet Union, although its growth*

has been more rapid than that of the captive countries. If the rate of growth of Western Europe is not to fall even farther behind that of the Soviet Union it is necessary that certain "bottlenecks" be eliminated.

1. Western Europe is a deficit area with regard to many raw materials. For this reason its industrial activities must be centered upon imports, fabrication, and reexports. It is greatly dependent, therefore, upon international trade, the expansion of which is indispensable to further economic growth.

2. The partial and imperfect integration of Western Europe tends to perpetuate the inefficient utilization of labor, capital, and natural resources. In the countries of Northwestern Europe economic growth has been limited by the shortage of labor (under existing technology). In the Mediterranean countries, where labor is more abundant, economic development has been retarded by shortage of capital.

V. *A major reason for the slow economic progress of the captive countries of Eastern Europe has been the tremendous drain of their resources by the Soviet Union. As in the Soviet Union, the weakest sector has been agriculture.*

1. The gain from captive tribute to the Soviet Union has been substantial, particularly in terms of war-sustaining resources. But this gain has been offset, in part, by the extra military and other security efforts on the part of the Soviet Union needed to prevent revolt in those countries.

2. A reasonable forecast of the economic future of the captive countries is difficult, if not impossible. Demographic and resource factors are favorable in varying degrees in these countries. But political conditions of crucial importance are unforeseeable. They include the extent of future Soviet exactions, the character and pace of industrial expansion required by the Soviet Union, the degree to which economic cooperation between the captive states might be permitted, the morale of the labor force, and even the continued existence of, say, Poland in its present boundaries.

3. For these reasons, the captive countries, in the long term, may prove to be an economic drag upon the Soviet Union.

VI. *Per capita personal consumption in the United States is more than 40 percent higher than it was before the war, while in independent Europe it has risen, on an average, by 11 percent. In contrast, per capita personal consumption in the Soviet Union and Poland is barely above the prewar level; in other captive countries, especially East Germany, it is still below that level. Thus, differences in living standards between the East and the West have widened over the past 15 years.*

VII. *Prior to the war Eastern Europe was more dependent, tradewise, upon Western Europe, than Western Europe was dependent upon it. Since the war, trade between these two regions has contracted greatly.*

1. In large part this contraction of trade has been caused by distortions in economic relationships arising from the imposition of the Iron Curtain between the Soviet bloc and the West.

2. The exportation of "strategic" goods from the West to the Communist bloc has been curtailed for reasons of military security.

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3. The reduction of imports into the Soviet bloc from the West has led to shortages of certain capital goods and raw materials, such as iron ore which, in part and at increased cost, has been met by greater domestic production and by greatly intensified intrabloc trade.

4. One effect of the contraction of East-West trade has been the cutting off of Western Europe's supply of certain raw materials from Eastern Europe, notably some foodstuffs, timber, and coal. The necessity of securing these materials from alternative sources has tended to accentuate the "dollar problem" of Western Europe.

5. Meanwhile, Western Europe has been making substantial progress in the lowering of many of its trade barriers. In general, the recovery and expansion of the trade of the West has paralleled the growth of national outputs.

VIII. *Careful consideration should be given, on the one hand, to the restraints on East-West trade that are important for direct military reasons and, on the other, to the desirability of cultivating friendship with the people in Communist countries via trade in nonstrategic goods. The line of demarcation between goods in each of these categories and other goods should be drawn as clearly as possible. At one extreme is the possibility of cutting off all trade between the free world and the Communist bloc. At the other, is the possibility of encouraging the importation of needed raw materials from Communist countries in exchange for consumer, as opposed to producer, goods.*

IX. *The West has tremendous economic power whereas the Soviet bloc, through propaganda and unfulfillable promises, has been hiding its lesser economic strength. It is in the interest of the United States that these facts be made known throughout the world, particularly in underdeveloped areas.*

1. In accordance with their ideology, the leaders of the Soviet Union are trying to propagate the idea that the economies of the West are in decay. In pursuit of this goal, even patent falsehoods are circulated.

2. Domestic statistics of the Soviet bloc are often misleading, with unannounced changes in definitions and calculated omissions being customary practices. Complete fabrications appear to be exceptional, but careful cross-checking is always needed before accepting Soviet bloc data.

X. *The Communist bloc will continue intense efforts to increase its output, especially heavy industry, with little regard for human costs. In view of this fact, appreciation of the substantial successes of the United States and independent Europe, acting in close cooperation, in achieving both industrial expansion and better living is essential. Such cooperation, continued in the future, can serve as a basic weapon in the East-West struggle.*

1. Utilization of United States foreign trade policy as a positive means for strengthening the free world versus the Communist bloc should be considered. Expansion of trade among the countries of the free world would be one means of combating the trade overtures that the Soviet Union has been making in Western Europe and other parts of the free world. Special attention should be given to the trade relations between Japan, on the one hand, and Western Europe and the United States, on the other, with a view to strengthening the economy of Japan.

2. In Europe, the main task of aiding economic recovery has been accomplished, although a few areas requiring direct assistance (notably Greece) remain. Technical problems of special importance for the western economies, such as atomic power and geriatrics, appear to be major fields for further cooperation.

XI. *It is important that the Western countries intensify their efforts in the field of education. The more immediate need is to train adequate numbers of scientists, engineers, and technicians. In the longer run, it is essential to keep raising the level of general education.*

XII. *Superiority in economic strength and economic growth are desirable ends in themselves, but they do not assure political and military security. In fact, an economy that is already largely mobilized for war can operate with great effectiveness, and for some time, against a considerably stronger economy that is not so mobilized.*

1. The present level of economic mobilization, in relation to national resources, is greater in the Soviet bloc than in the United States, and especially than in Western Europe. For this reason, the Soviet bloc can bring its full military strength into action more rapidly than can the West. For the same reason, and because the total resources of the West are greater, the West can ultimately mobilize overwhelmingly greater economic strength than can the Soviet Union, given enough time to do so.

2. The quality of economic goods in the Soviet Union varies greatly, being at its best in military and war-supporting goods and at its poorest in consumer goods. However, under an authoritarian economy, like that of the Soviet Union, poorer grade goods can be kept in use much longer than they would be under a competitive economy.

3. An authoritarian state, by virtue of the fact that it is a dictatorship, can act quickly, without having to engage in extended internal debate and discussion. For a time, at least, this power to utilize "surprise" tactics might counterbalance relative economic weakness.

4. Although the ultimate determinant of the outcome of a long war usually is economic superiority, a strong economy can be held at bay during the initial stages of a war by a country whose economy is less strong, but mobilized for military action. This is especially the case when important new types of military weapons are available. Peacetime economic strength, in and of itself, therefore, is not a measure of military posture.

TABLE 1.—*Summary tabulation: Population and manpower*

	United States	Western Europe	Soviet Union	Captive Europe
Total population: Change (1938–52)	20-percent increase	Western Europe: 9-percent increase, Independent Europe: 7-percent increase.	9-percent increase within postwar boundaries.	4-percent decrease, 12-percent decrease excluding East Germany.
Annual increase (1948–52)	1.76 percent	0.9 percent (range f: −0.01 percent in Austria to 2.4 percent in Turkey).	1.5 to 1.7 percent	1.1 percent (1950–52).
Size (end 1953)	161 million	280 million (Western Europe), 332 million (Independent Europe).	212 million	92 million.
Trends in age structure	Total growth has far exceeded increase of working-age groups in recent years.	War losses largely offset by natural increase, but trend toward "aging" is accelerating.	Prewar gains in survival rates now yielding large additions to working-age groups.	War losses and refugeeism depleted working-age groups.
Labor forces: Trends	67 million (1953), 56 million (1939)	125 million (1952–53), 10-percent increase, 1938–48.	105 to 110 million (1953), 95 million (1940).	Near complete labor mobilization.
Labor distribution	Agriculture: 11 percent of employed persons and declining. Manufacturing and mining: 40 percent of nonfarm employees.	Agriculture: Half the active males in southern countries; under 20 percent in northwestern countries. Industry: Number employed increased 20 percent or more over 1938 in 10 countries.	Agriculture: 50 to 55 percent of labor force. Industry: 60 to 65 percent of nonagricultural labor of which 70 percent in "heavy" branches.	Agriculture: Over half the active males in population. Industry: About 8.5 million.
Participation of women	Aged 14 and over: 32 percent (1953), 27 percent (1940).	Range: Under 20 percent (Italy, Netherlands, Belgium) to over 50 percent (Turkey, Yugoslavia) employed.	Over half those over 15 employed, higher seasonally. Important in Soviet bloc agriculture.	Pressed to enter urban employment.
Hours weekly in industry	41 (1953), 38 (1939)	Median: 45 (1952 to 1953) (range Italy, 39; Germany, 48).	48 minimum (1953), 40 average (1937).	46–48 minimum.
Unemployment	Near "frictional" level in recent years.	Postwar: High employment in northwestern countries, but chronic unemployment in southern countries.	None officially admitted but low productivity reflects considerable concealed underemployment.	
Output per man or man-hour in manufacturing.	Man-hour output increases 2 to 3 percent per year. 30 percent above 1938.	Risen 18 percent since 1938; 25 percent since 1948. Present levels range from 15 to 50 percent of United States level (value added basis).	1953 man-hour output equaled 1937 (1937 level about 30 percent of United States), 1953 man-year output up 20 percent.	Very low and not advancing as planned.
Projections (to about 1970): Total population	204 million	302 million, Western Europe; 360 million, Independent Europe.	260 to 280 million	100 million.
Working-age groups	103 million, 15 to 54	200 million, 15 to 64; Western Europe; 240 million, 15 to 64, Independent Europe.	146 million, 15 to 54	62 million, 15 to 59.
Retirement-age groups	10 percent, 65 and over	15 to 17 percent, 65 and over	Generally shorter life expectancy.	

The combined population of the United States and Western Europe is not only larger than the Soviet bloc total but has also increased more rapidly over the last 15 years. The war losses of the West have been largely offset by natural increase, while in the Soviet Union, and the Eastern countries generally, large war losses led to labor conscription of young people and increased dependence on women workers.

From 50 to 55 percent of the labor force of the Soviet Union is still engaged in agriculture, compared to about 11 percent in the United States. Of nonfarm Soviet labor, industry employs about 60 to 65 percent. Of these, 70 percent are employed in "heavy" branches and this emphasis is being copied in the captive countries through shifts from handicrafts and light industry. Total output in the Soviet Union has been increasing only slightly more rapidly than the increase in the size of the labor force. The northern countries of Western Europe have made impressive postwar gains in productivity, but in captive Europe low wages and absence of rewards have apparently resulted in low output per man. The United States is far superior to both Western Europe and the Soviet bloc in labor productivity.

Education in the Soviet Union emphasizes training designed to forward her material aims. While the West may eventually be exceeded in numbers of scientists and engineers, European science and American development may nonetheless retain a lead for the West.

Even though the labor force of the United States is only 67 million compared with 105 to 110 million in the Soviet Union, the productivity of the average worker in the United States is so much greater, that total production is far greater. Total performance of the West is raised by American productivity more than Western superiority in numbers alone would provide. Over the period 1950 to 1970, the number in the working ages 15 to 54 in the Soviet Union will increase by an estimated 28 percent compared with an increase of about 22 percent in the United States. There are, however, both younger and older workers in both countries. There is no apparent reason to expect that American output per man will not continue to offset the difference in numbers.

TABLE 2.—*Summary tabulation: Agriculture and food supply*

	United States	Western Europe	Soviet Union	Captive Europe
Agriculture:				
Production	Volume of production nearly ½ larger than prewar in spite of fewer farmers and official restriction of some crops.	Rapid expansion since 1948. By 1950 production was at least 11 percent higher than prewar and is now about ¼ above prewar. Rate of increase has slowed down, however, since 1950.	Officially, only 10 percent higher in 1952 than in 1940, and that is probably an overestimate. The "new" program is to emphasize grain, livestock, potatoes, and vegetables.	Slow postwar recovery. Per capita output lower than prewar, especially livestock. Collectivization drives have retarded production.
Arable land area	Arable land—177 million hectares (nearly 400 million acres). Slightly more than 1 hectare (about 2½ acres) per capita.	On a per capita basis, about ⅓ hectare per person or less than 1 acre.	A total in excess of 225 million hectares or slightly more than 1 hectare per capita. When adjusted for climatic hazards, etc., this is estimated to amount to only about 70 percent as much "standard farm land" as in the United States.	Total arable area about ½ that of Western and Mediterranean Europe; but equal to about 1 acre per capita.
Agricultural labor	Farm population is now less than 14 percent of total; women are not much used in the farm labor force.	In the "northwest" about 20 percent of the population is agricultural. In Mediterranean Europe about half is so engaged and women commonly work in the fields.	One-half the total population is engaged in agricultural production, with more women than men so utilized.	Agricultural production requires labor of fully ½ total population.
Agricultural organization	Family farms strongly predominate as operating units with families living on the land. The better, larger, more efficient ¼ of the farms produce about ¾ of the products marketed.	Family farms center on villages. Production somewhat retarded by small holdings, fragmentation, government interferences, narrowness of market, and lack of incentives to heighten efficiency.	Collectivization of farms, either as collectives (kolkhozy) or as State farms (sovkhozy).	Collectivization has proceeded only part way, but has apparently not been abandoned, only delayed.
Use of machinery (as indicated by use of tractors).	More than 4 million in use, equal to about 20 per 1,000 hectares (approximately 2,500 acres).	Parts of free Europe exceed the United States in tractors per unit area under cultivation. Other areas much less supplied.	Number of tractors per unit area under cultivation only 10 percent as numerous as in the United States but larger and used more intensively.	Scarce except in Czechoslovakia and East Germany.
Fertilizers	Usage has about tripled since prewar.	Overall usage has nearly doubled since prewar.	Mineral fertilizer use confined largely to industrial crops perhaps double prewar.	Incomplete data suggest usage not much above prewar level.

			These areas have experienced repeated food supply difficulties during much of the postwar period and supply per capita is apparently less than prewar.	
Food supply	Abundant; average civilian consumption per capita 13 percent above prewar. Surplus for export.	Domestic production per capita about 7 percent above prewar. Still a food and feed deficit area, but not serious so long as New World is faced with continuing surpluses.	Official announcements now stressing need for increased production of food.	Before the war a moderate food surplus area, now short in most years.

COMMENTS AND CONCLUSIONS

Agriculture is a limiting factor to economic development in the Communist world, but is much less so in the West. Agricultural production is the tightest bottleneck standing in the way of the further rapid industrialization of both the Soviet Union and the captive countries of Eastern Europe.

Although agricultural production in the Soviet Union was 10 percent higher in 1952 than in 1940, it started from a low base. In captive Europe, per capita output, especially of livestock, is actually lower than it was before the war.

In both the Soviet Union and the captive countries, the production of food and fibers requires the labor of fully one-half the total population, whereas in independent Europe not more than one-third of the population is so engaged. It is estimated that the productivity of the average farm worker in the Soviet Union is not more than one-fifth that of the average farm worker in the United States.

The collectivization of farms in the East has tended to retard incentives in agriculture. In Western Europe there are also influences that make for something less than satisfactory agricultural performance. These are: small holdings, fragmentation (numerous small strips), Government interferences (especially over protection from competition) and a narrow market involved in serving mostly a national population restricted in numbers and buying power.

Tractors are much more common in the West than in the East.

Even official Soviet announcements indicate that agriculture is probably their No. 1 economic problem.

Although Western Europe is a food and feed deficit area, this is not serious so long as the new world is faced with continuing agricultural surpluses.

TABLE 3.—*Summary tabulation: Raw materials*

	United States	Western Europe	Soviet Union	Captive Europe
Minerals	World's leading producer and/or processor of several major minerals among the ferrous metals, nonferrous metals and nonmetallic groups. A very large importer and user of many minerals.	Substantial production of mercury, sulfur, tungsten, zinc, lead, copper, and bauxite in Mediterranean Europe.	In a strong surplus position with regard to a few minerals, including chromite and manganese. Weak with respect to domestic production in many others. Great distances separate iron ore and coking coal. Steel scrap not as abundant as in the United States.	Weak in reserves of iron ore, but this may not be a serious long-term handicap to the Soviet Union in view of resources in Manchuria and North Korea. Otherwise, with few exceptions, generally weak in the more significant minerals and processing facilities as well.
	In a strong position with regard to nearly all minerals, relative to the Soviet world, particularly in conjunction with Yugoslavia, South America, Australia, and Africa. No shortages of iron ore, coke, or steel scrap. New ore developments in Labrador, Venezuela, and Liberia.			
Timber products	A large producer and user. Some imports required, particularly of pulp. Reserve resources require conservation if they are to meet needs reasonably well.	Mostly (excepting the northern countries) a timber-deficit area. Historically secured a considerable part of its needed imports of softwoods from behind the Iron Curtain. Postwar shortage of forest products not yet fully overcome.	Huge forest reserves, but located inconveniently relative to consuming centers.	Production and consumption fairly well balanced.
Textile fibers	The world's major producer and exporter of raw cotton. High in the synthetic fibers. A deficit area with respect to other vegetable fibers and wool partly because of high levels of consumption.	A deficit area with respect to the major textile fibers. A major importer thereof and exporter of the processed product. High in synthetic fibers.	Large producer of cotton (about ⅓ as much as the United States) and of wool, flax, and hemp. Imports wool, cotton, and jute. Exact status as to synthetic fibers is not clear.	Deficient in cotton, but otherwise has a fair balance between production and consumption of major fibers but at a relatively low level of usage.

COMMENTS AND CONCLUSIONS

Neither the Soviet bloc nor the West lacks raw materials at the present time. Their distribution for the most part is better in the West than in the East so long as deep-water transport is available among the several continents. Supplies of a few materials (tin, natural rubber, etc.), now near the margin of the expanding Soviet bloc, though important, appear not to be absolutely vital to the economies of either the Soviet bloc or the West. As time passes, however, certain minerals will become scarcer relative to demand and substitutes will become more and more important.

The Soviet Union has huge forest reserves, although some of them are inconveniently located in remote river basins now accessible from the Arctic Ocean for only a few weeks each year. Western Europe, with the exception of the northernmost countries, is a timber-deficit area. At present there is a shortage of forest products in Western Europe by virtue of the fact that historically that area secured part of its needed imports of softwood products from behind what is now the Iron Curtain. Timber reserves of the United States and Canada are still substantial.

Western Europe is a deficit area with regard to the major textile fibers and both the East and the West import one or more major fibers in very significant amounts. The United States is the foremost producer of cotton. The Soviet Union is a large producer of cotton, flax, and hemp. Production of synthetic fibers appears to be much more fully developed in the West.

TABLE 4.—*Summary tabulation: Steel*

[All tonnage metric]

	United States	Western Europe	Soviet Union	Captive Europe
Apparent consumption (1953)	634 kilograms per capita	169 kilograms per capita average. Upper: Sweden, 306 kilograms per capita; United Kingdom, 323 kilograms per capita.	187 kilograms per capita Soviet bloc average: 171 kilograms per capita.	141 kilograms per capita.
Production	Production: 1949, 71 million tons; 1953, 102 million tons; 1960, 117 million tons (anticipated).	Production: 1953, 63 million tons (slight decline from 1952); 1960, 85 million tons (anticipated).	Production: 1953, 38 million tons; 1960, 60 million tons (est.)	Production: 1953 (estimated), 12 million tons; 1960 (estimated), 17 million tons.
Production ratios	Assuming loss of Europe to communism: United States 1953, 102 million tons (capacity 113); Communist 1953, 113 million tons. Assuming restoration of captive Europe to the free world: Free world, 1953, 177 million tons; Communist, 1953, 38 million tons.	Will probably maintain a sizable lead over Soviet bloc for some time to come.	Ratio of production of Soviet bloc to production of Western Europe: 1949, 63 percent; 1953, 80 percent. Ratio of production of Soviet bloc to production of the West (including the United States): 1929, 10 percent; 1949, 26 percent; 1953, 31 percent; 1960 (planned), 38 percent (including anticipated output for United States).	
Trends in production	Anticipated 1960 production in the West will amount to 202 million tons compared with 77 million tons in the Soviet bloc.	European Coal and Steel Community alone exceeds present Soviet output (40 and 38 million tons, respectively). Export demand for steel products will determine rate of expansion of steel output.	40-year lag in tonnage. There is a remarkable similarity in rate of growth of steel production in Soviet Union since 1920 and in United States in 1880–1913 period. Soviet Union's goal of 60 million tons, if achieved in 1960, would narrow this lag slightly.	Czech, Polish output together almost ⅔ of regional total, but each captive country plans to raise national output.
Iron ore	Mesabi high-grade to be exhausted within 20 years. New developments overseas have transport cost advantage due to water shipment.	Increasing production of lean domestic ores. Development in deposits of dependent overseas territories.	Progressive depletion of high-grade ore near centers of industrial production. Lean ores increasingly used.	Almost entirely dependent upon outside sources. Ukrainian ores have replaced Swedish as principal supply.
Technology and organization	World's most advanced. High investment of recent years now paying off in new large-scale capacities installed. Increasingly bigger units designed for high productivity, but high output essential to low-cost production.	Recently organized the Coal and Steel Community to cut costs, rationalize the price structure and provide common market among 6 important producers. Present emphasis on installation of most modern milling equipment. United States aid ($270 million) used mostly for such purposes.	Has had the advantage of western technology in getting its steel industry organized. Reason for believing that use of plant at capacity will necessitate rapid replacement, thus retarding rate of growth of capacity.	Apparent pattern is Soviet-dictated one allowing self-sufficiency to no one country while gearing output to Soviet needs.

COMMENTS AND CONCLUSIONS

Per capita consumption of steel in the Soviet bloc is much less than in the United States, though about on a par with independent Europe as a whole. The United States and the major countries of Western Europe are steel-using economies in contrast to the Soviet bloc (and much of independent Europe) which use relatively little steel for civilian purposes.

The major emphasis of Soviet bloc economies is on "heavy" industry, i. e., producers' goods and armaments. Although the Soviet Union has done a remarkable job in increasing steel output, it has not been able to better the long-term trend of the West in spite of primary emphasis in that sphere. Soviet steel production continues at about the level of production in the United States 40 years earlier. Steel output of the Soviet Union in 1953 totaled 38 million metric tons in comparison with the production of 63 million tons in all of Western Europe and 102 million metric tons in the United States.

The ratio of production in the Soviet bloc to production in the West (currently 31 percent) has been increasing, although, according to plans, their production in 1960 will equal only 38 percent that of the West (77 million metric tons and 202 million metric tons, respectively).

Iron ore is abundant and relatively accessible in both East and West. Problems regarding it have to do with the accessibility of high-grade ores rather than with absolute shortages. Countries of the West will benefit from relatively lower transport costs as deposits now under development become important on both sides.

Western Europe recently organized the Coal and Steel Community for the purpose of cutting costs and rationalizing prices of steel.

There is reason for believing that the Soviet Union is using its steel plant so intensively as to make relatively frequent replacement necessary. The effect of this may be to retard the rate of growth of steel capacity in the Soviet bloc.

TABLE 5.—*Summary tabulation: Power resources*

	United States	Western Europe	Soviet Union	Captive Europe
Consumption	40 percent of world total (with Canada) in 1950, including relatively very large amounts of petroleum, natural gas, and hydroelectricity. Commercial energy used in 1950 amounted to 7.5 tons coal equivalent per capita in the United States, 6.5 tons in Canada.	18 percent of world total in 1950 with coal providing a large part of total. Use amounted to 2.2 tons coal equivalent per capita in 1950.	12 percent of world total in 1950 including relatively large amounts of coal and wood. Commercial energy used in 1950 amounted to 1.5 tons coal equivalent per capita.	7 percent of world total in 1950 with major emphasis on coal. Per capita use in 1950 amounted to 1.7 tons coal equivalent of commercial energy in 1950.
Production:				
General	The postwar situation has been in the nature of a surplus, accompanied by cutbacks in coal and petroleum production	Comparatively slow rehabilitation and expansion of this sector of the economy, recurrent shortfall with respect to targets, plus increased dependence upon uncertain overseas production suggests a relative power shortage.	Postwar production, especially of coal, shows a large increase.	Restoration of production to prewar level (or slightly more). Still basically a deficit area.
Coal	North America in 1953 produced 437 million tons, ¾ of all the world's coal. Has large reserves.	Produced 514 million tons in 1953. ⅛ of world total. Reserves of the Ruhr are enormous.	Soviet bloc produces about ⅓ of all the world's coal. Tremendous reserves, but not well located relative to iron ore.	Silesian reserves very large. Confronted by problems of capital investment and worker morale.

Petroleum	Reserves are large but usage has been and is very large. Production in 1953 was 323 million tons. Also controls large overseas production.	Large consumer but produces very little crude. Controls substantial overseas production.	World's third largest producer (52 million tons in 1953), but producing regions not well located relative to consuming areas.	Rumania, Hungary, and Austria produced about 16 million tons in 1953.
Electricity	Generated 513 billion kilowatt-hours in 1953.	One of the world's most electrified areas even as early as 1929. Produced 302 billion kilowatt-hours in 1953. Notwithstanding rapid development of hydroelectric resources, the area appears to be facing a power shortage.	Produced 133 billion kilowatt-hours in 1953. Has been maintaining an annual 13 percent increase in production since 1950. Thermal sources still favored, notwithstanding a hydro potential larger than either Europe or all of North America.	Relatively undeveloped; produced 60 billion kilowatt-hours in 1953. Plans call for increasing capacity to 82 million kilowatt-hours by 1955.
Atomic power	Probably nearest to commercial utilization and most advanced in technology required.	Development of power from atomic energy could transform area into a low-cost producing area and change the East-West balance.	Very incomplete geological evidence suggests that atomic resources may not be so abundant as in the free world.	

COMMENTS AND CONCLUSIONS

Power, as a means of economizing labor in terms of output, is one of the most important forms of "capital." Compared with the West, the Soviet bloc is a labor-intensive economy utilizing human time and energy in large amounts and lesser amounts, comparatively, of inanimate energy. In 1950 the Soviet Union consumed 12 percent of total world power in comparison with 18 percent consumed by Western Europe.

The United States consumed more electricity in 1950 than all of Western Europe together. Even though the Soviet Union has been expanding its electricity production 13 percent per year, it is still far behind Western Europe, particularly with regard to hydroelectric power. Neither the West nor the East at present is short of petroleum, but Europe produces very little crude. The Soviet Union is fairly well supplied, not only within its own borders, but also by wells in Captive Europe. The huge petroleum resources of the Middle East are strategically of great importance inasmuch as that area is the principal supplier of Western Europe.

The resources for producing adequate power exist in both East and West, but the geographical distribution of present development and reserves appears to be better in the West than in the East.

The development of efficient commercial power derived from atomic energy, now potential but not yet realized, could transform the power picture quickly. Atomic power, if it should become available in abundance and at low cost to Western Europe, would greatly alleviate if not entirely correct the emerging power deficit of that area, and hence could alter the East-West economic balance.

TABLE 6.—*Summary tabulation: Transportation*

	United States	Western Europe	Soviet Union	Captive Europe
General	Relatively farthest advanced in speed and cheapness of transport, especially passenger and private travel.	Highly developed railroads, great maritime power, and increasing use of motor vehicles.	Great distances, separation of population and resources, and severe climate handicap Soviet transportation.	Almost totally dependent upon railroads and inland waterways.
Railroads	Among public carriers, 1953 (excluding private vehicles), about 50 percent of freight and passenger volume.	Rapid restoration after war damage and new extensive electrification of main lines.	About 85 percent of total freight and passenger volume carried by railroads.	War indemnities to Soviet Union delayed postwar restoration.
Lines	Very extensive; high density in relation to population. Medium density in relation to area.	Dense in relation to territory, less dense in relation to population.	West of the Urals, dense network. Overall density low in relation to area and to population.	Central Europe using dense prewar networks while Black Sea countries strive to build.
Rolling stock	Large postwar investments have modernized equipment in most lines. Changeover to diesel engines widespread.	Wartime losses made good in most countries. New equipment and better organization give improved operation compared to prewar.	Less than half the pool of locomotives in Western Europe (1953). Only 2 or 3 percent diesel or diesel-electric.	About 22,000 locomotives in 1953 versus 34,000 in Soviet Union and 72,000 in Western Europe. Persistent freight-car shortages.
Operations	Signaling and control equipment surpassed nowhere. Organization for tracing cars, handling transcontinental traffic unparalleled.	Northwestern countries using advanced techniques and equipment. 10 continental countries developing EUROP car-sharing pool.	Ton-miles expended per unit of output higher than any principal power. About 44 percent as efficient as United States railroads (1950 gross ton-miles per freight-train hour).	Longer trains, longer hauls, longer hours, and more railroad employees; all devices used to overcome postwar shortages in motive power and rolling stock intensified by greater demands.
Freight volume	About 605 billion ton-miles (1953).	About 134 billion ton-miles (1953).	Soviet bloc ton-mileage over 4 times that of Western Europe but 82 percent of West.	
			Rapid growth. Index: 1928=100; railroads, 1953=840.	About 72 billion ton-miles (1953).
			About 538 billion ton-miles (1953).	
Motor vehicles	1953 production over 15 times Soviet planned production for 1955 (7,320,000 and 477,000, respectively.)	Produces 4 times the number produced in the Soviet Union and over 3 times the Soviet bloc total. 1952: 1,820,000.	Only 3 percent of total ton-mileage for all carriers.	
	Greatest number per capita in the world.	Road haulage increasing.	Soviet bloc production 1952, about 535,000.	
Roads and highways	Over 3 million miles, of which ¼ paved and another ⅓ or more surfaced.	Seven Brussels Pact countries have about 1 million miles of roads and streets, indicating a West European total equivalent to that in the larger Soviet Union.	Chiefly short-haul trucking. Total Soviet bloc truck park about ¾ that of Western Europe in 1953, but only 20 percent of total West.	
			Prewar estimate that only 5 percent hard-surfaced probably still applicable.	Predominantly city streets and country roads with the few highways concentrated in East Germany, Poland, and Western Czechoslovakia.
			Weather conditions limit usefulness.	

Merchant shipping	High cost of operation has kept much of the wartime-built fleet in reserve.	Largest aggregate tonnage: 57 million deadweight tons in 1953 compared with United States 36 million. Soviet bloc 3.3 million.	Fleets of Soviet bloc only 6 percent the tonnage of Western Europe; 4 percent that of West.	Only Poland has a fleet of any size.
Inland waterways	Large Great Lakes fleets and considerable river shipping.	Extensive inland shipping following restoration of most war damage.	Second in importance among major carriers, but only 6 percent of total ton-mileage.	Port facilities and shipyards under development in East Germany and Poland.
		Ton-mileage of the barge fleets of 6 West European countries about equal to volume in Soviet Union.		Extensive river and canal systems.

COMMENTS AND CONCLUSIONS

Rail distances in the Soviet Union are tremendous and, in terms of ton-miles expended per unit of national output, its transport requirements are greater than those of any other principal power.

The diversity of means of transport in the West is in marked contrast to the dependence of the Soviet Union upon its railroads. Although intensive use in the railroad systems of the Soviet bloc has formerly yielded economies, the pressure of growing needs indicates future limitations of transport on the rapidity of Soviet economic growth. The West is well equipped, highly diversified, and relatively free of such limitations.

Western Europe produces over four times as many motor vehicles as the Soviet Union and more than three times as many as the whole Soviet bloc. The United States overshadows both regions. Production of motor vehicles in the United States in 1953 was over 15 times as great as the 1955 plan figure of the Soviet Union. In Western Europe, as in the United States, motor vehicles have taken over a considerable part of the total transport load. In the Soviet bloc, on the other hand, road traffic is confined almost entirely to short hauls.

The maritime countries of Western Europe have done an outstanding job in restoring the war losses in their merchant fleets. Lack of ports would prevent the Soviet Union from taking its place as a maritime nation even if its autarchical ideology did not lead it to choose a limited, politically regulated, role in international trade.

Despite the weaknesses and imbalance among carriers apparent in the Soviet Union, it is evident that a rapid increase in output (i. e., freight volume transported) actually has taken place. Future increases will apparently contribute to the burden of the railroads in about the same proportion as before.

TABLE 7.—*Summary tabulation: National accounts*

Factor	Measure	United States and Canada		Free Europe		Soviet Union	Captive Europe	
		United States	Canada	Median	Range		Poland	East Germany
I. Aggregate gross national products in 1952–53	Billions of United States 1952–53 dollars at estimated domestic purchasing power.[1]	385		305		110	45	
II. Growth of national products:		*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
(*a*) 1938 [2]–53	Constant national prices [3]	120	127	40	6–70	62	36	6
(*b*) 1948–53	do	27	27	21	2–78	43	46	51
III. Change in per capita private consumption, 1938 [2]–53	do	+45	+49	+11	−5–+30	+3	+2	−19
IV. National accounts in 1952–53:								
1. Industrial origins of national income:								
(*a*) Percent from agriculture	National factor costs [4]	7	14	19	6–57	23	22	16
(*b*) Percent from industry [5]	do	41	(42)	41	14–55	46	51	57
(*c*) Percent from services [6]	do	52	(44)	36	29–47	31	28	27
2. End uses of the gross national product:								
(*a*) Private consumption	National market prices (factor costs in U. S. S. R. and Poland).[4]	63	62	66	50–82	47	45	50
(*b*) Government consumption		20	17	13	9–29	27	32	35
(1) Including defense and transfers to foreign accounts.		14	6	5	0–19	15	18	21
(*c*) Gross investment (adjusted for foreign-trade balance).		17	21	20	2–30	26	23	15
3. Account interrelations:								
(*a*) Food as percent of total private expenditures.	National market prices (factor costs in U. S. S. R. and Poland).	27	25	39	31–61	+50	64	39
(*b*) Man-year productivity in agriculture as percent of productivity in industry.[5]	National factor costs	51	74	55	35–120	19	19	30
(*c*) Investment/income ratio in agriculture as percent of investment/income ratio in industry.[7]	do	115	97	62	11–106	[8] 43 [9] 73	62	50

[1] Converting European national products on the basis of foreign-exchange rates, as done by FOA an l OEEC, gives different results with the same underlying information. (For details see ch. IX.)

[2] For the years of price basing, see appendix table I.

[3] Base year: 1936 or 1937 in some cases.

[4] Factor costs are actual or market prices with indirect taxes deducted and subsidies added. In this way, an approximation to the real resources (as differentiated from monetary flow) directed to each sector of the economy can be gained. In many economies, such as the United States, the differences between calculations based upon market prices and those based upon factor costs are small. For the Communist bloc countries, which depend largely upon indirect taxes for government financing, and which are charac terized by multiprice systems, including subsidized producers' goods and armaments, the d ifferences are very large.

[5] Mining, manufacturing, utilities, construction.

[6] Including transportation and communication.

[7] Ratio of gross investment to net income generated in the respective sectors.

[8] 1948.

[9] 1953.

COMMENTS AND CONCLUSIONS

The basic characteristics of the national accounts of independent Europe, the Soviet Union, and two captive states (Poland and East Germany), may be summarized as follows:

1. In terms of 1952–53 United States dollars, a measure which minimizes international differences, the total volume of economic activity in free Europe in that fiscal year was about 85 percent as great as that of the United States. The Soviet gross national product was some 30 percent the American, while that of the U. S. S. R. and captive Europe combined was less than a fourth that of the United States, Canada, and free Europe as a bloc.

2. The highest rates of growth in gross national product, 1938–53, have been observed in the United States and Canada, where more than a doubling took place. Over these same years, the growth of Soviet economic activity has been only half as great, though still a third higher than the median for independent Europe. In captive Europe, the maximum growth has been 36 percent in Poland; the probable minimum, 6 percent in East Germany.

3. The pattern of growth between 1938 and 1953 has varied greatly from country to country. In some, e. g., the United States and Canada, the most rapid growth was achieved during World War II. In most of free Europe economic recovery was well underway by 1946, with prewar levels exceeded by 1948; subsequent growth has consequently been slower. The Soviet Union and captive states were slower in regaining prewar levels but have since kept up a substantial growth rate.

4. Changes of standards of living—which express a complex relationship between growth of national product, the share of consumption in that product, and population movements—have been most marked in Canada, the United States, and Turkey, on the one hand, and East Germany on the other. In the former group, living standards have risen by more than 30 percent since 1938; in the latter country, they have fallen by 19 percent. In independent Europe as a whole, the median rise has been 11 percent, compared to not more than a return to prewar or even an actual decline in the Soviet Union and captive Europe.

5. The shares of national income falling to the various economic sectors reflect not only resource allocations and productivity, but also governmental policies and controls. The stress upon industry and the weakness of services in the Soviet bloc are noteworthy.

6. The expenditure patterns of the gross national products are also revealing. It should be noted that in most Western countries today, about 65 percent of the gross national product is consumed by households. The Portuguese pattern, with 82 percent consumed, is common to many underdeveloped countries. The Yugoslav pattern, with only 50 percent consumed, is an extension of Soviet-bloc practice. In Yugoslavia, as in the Soviet bloc, the extreme weight of government expenditures, especially defense and (in Germany and Poland) tribute to the Soviet Union is clear cut. In independent Europe, generally, military expenditures form a far smaller share of the national product—a median of 5 percent—than in the Soviet bloc, Yugoslavia, or the United States.

7. With a few exceptions, such as Greece, the European countries, East and West, are characterized by substantial to very high rates of investment.

8. The directions of national economic efforts may also be deduced from several interrelationships in national accounts. Thus, the percentage of the consumer's budget devoted to food is inversely correlated to the standard of living; in independent Europe, only Greece has to devote over 60 percent of private consumption to food. In the Soviet bloc, the average proportion is close to 60 percent. A basic cause is the fact that the per capita returns in agriculture are exceptionally low, in relation to those in industry, in the Eastern countries. Thus, the pressures for the movement of labor out of agriculture are very high in those nations. At the same time, the propensity to invest in agriculture rather than in industry has been low. In the Soviet Union, however, it has risen sharply since 1948. Thus, some strengthening of the agricultural sector, though an in-movement of capital to counterbalance to out-movement of labor, is underway in that country.

PART ONE: CHANGES IN IMPORTANT ECONOMIC INDICES

The present economic capacity of Western Europe, the United States and Canada is significantly greater in terms of absolute magnitudes, diversity, and flexibility than the combined strength of the Soviet bloc. This conclusion emerges from comparisons of statistics relating to such basic indexes of economic strength as manpower, agriculture, steel capacity, transportation, and power potentials.

Chapter I. Population and Manpower

Although the population of the United States and Western Europe is larger than that of the Soviet bloc[1] *and although it increased more rapidly than the latter in the period 1938–52, current and prospective changes in its age structure are less favorable. However, in recent years output per worker in the United States and Western Europe has been increasing more rapidly than in the Soviet bloc.*

Population density ranges from 210 persons per square mile in Europe to 24 per square mile in the Soviet Union. If Canada and the United States are considered together, the density of population in North America is slightly less than in the Soviet Union and about one-tenth that of Europe. However, open lands do not provide the only room for growth. It is notable that in two of the countries in which population is most dense (Belgium and the United Kingdom) standards of living and productivity of workers are relatively high.

The population of Western Europe and of the United States grew during the war decade (1938–48), notwithstanding war losses. The population of the Soviet Union gained also, despite greater war losses, partly at the expense of the captive countries of Eastern Europe where population declined. In the 14-year period 1938–52 the population of the Soviet Union increased about 9 percent. In the same period the population of Western Europe also grew 9 percent, whereas in Eastern Europe it actually declined 4 percent (12 percent if East Germany is excluded).

The population of the Soviet Union at the end of 1953 was approximately 212 million, compared with about 280 million in Western Europe and 161 million in the United States. Captive Europe's 92 million make a Soviet bloc total of 304 million compared with 441 million in the West.

POPULATION STRUCTURE

In the more advanced countries of the free world death rates have been declining for some time. Indeed, one of the outstanding characteristics of European and other "western" nations is the "aging" of

[1] See glossary.

their populations. It has been estimated that in Western Europe the proportion of persons 65 years of age, or over, will increase during the next 50 years from its present level of 10 percent to between 15 and 17 percent.

The death rate in the Soviet Union has fallen from about 19 per thousand before World War II to about 12 per thousand at the present time. An official, although doubtful, claim places it as low as 8.9 per thousand. (In Denmark, for example, the death rate is 9.3 per thousand, in Sweden 9.5, in the United States 9.6 and in the United Kingdom 11.3).

Since World War II, birth rates in the West have risen. This phenomenon, together with the increases in the upper age groups, has resulted in relatively small gains in the working-age groups. This is a trend that will probably persist until 1960 when the "war babies" start entering the working force.

In the Soviet Union there was an upsurge in survival rates just before World War II. The age groups born then are now entering the labor force in large numbers. This fact, together with the smaller proportion of aged people than in the West, has resulted in a more favorable relationship between population in the productive age group and dependents than in the West.

The situation in the captive countries tends to reverse the position in terms of the Soviet bloc, since war losses, expulsions, and refugeeism have reduced the numbers in the working-age groups and high postwar birthrates have increased the proportion of dependent children.

LABOR FORCES

Generally speaking, the losses occasioned in Western Europe by the war were outstripped substantially by the natural increase in numbers. The number of people available for productive labor was somewhat higher in the immediate postwar period than it had been before the war. In 1948, after industrial production in Europe as a whole had regained its prewar level, European industry employed nearly 10 percent more people than in 1938.

Important segments of European industry were working far below capacity owing to irregular supplies of raw materials and other production bottlenecks. Since output per man was low it was natural that, as the bottlenecks were broken, big increases in output should materialize without corresponding increases in employment. In the four year period 1948–52 industrial production in Western Europe increased 50 percent, an accomplishment that was made possible by a 40-percent increase in output per man together with a 10-percent increase in employment and a slight lengthening of the workweek. The labor forces of the OEEC countries totaled about 125 million at the end of 1952.

The war seriously affected the working population of the Soviet Union. One-fourth of all males between the ages of 25 and 44 probably perished. Productivity declined seriously in many sectors, although it increased again as the economy was converted even more completely to a wartime basis. Working hours were increased sharply during the war and the proportion of women in urban employment increased from 38 percent to 53 percent (the highest wartime participa-

tion of women in the United States was 39 percent). It was by virtue of such measures, together with the evacuation of men from German-occupied territories, that the Soviet Union was able to mobilize 30 million men and 5 million women to maintain its armed forces and to replace 20 million war casualties.

By the end of the war the economy of the Soviet Union had sunk to a low level. Living standards had fallen drastically, with consumption goods and housing being particularly hard hit. During the fourth 5-year plan (1946–50) the labor force apparently surpassed the prewar level. Some 7 million workers were added to the nonagricultural labor force, an accomplishment made possible through partial demobilization, continued labor conscription of 14- to 17-year-olds, and the forcing of women into the factories.

Current estimates indicate that the employable labor force (persons 15 years of age and over) in the Soviet Union at present numbers between 105 and 110 million persons, compared with about 95 million in 1940. Between 75 and 80 percent of all males and females 15 years of age or older are probably in the labor force.

The comparable figure for the United States is 58 percent, or, in 1953, a labor force of about 67 million persons. The comparable figure of 1939 was just under 56 million. The difference is accounted for principally by the higher employment rate of women in the Soviet Union (about 55 percent compared with 33 percent in the United States) and the smaller numbers attending school on a full-time basis in the Soviet Union than in the United States.

From 50 to 55 percent of the labor force of the Soviet Union is still engaged in agriculture. Of the Soviet civilian nonagricultural labor force, a little more than one-third is in government, commerce, education and other services. About 70 percent of all industrial workers are employed in heavy industry, which itself accounts for about 70 percent of total industrial production.

In 1937 the Soviet workweek was 40–41 hours. Today a workweek of 48 hours is compulsory. By way of comparison, the median workweek in Western Europe is 45 hours and in the United States, in manufacturing, it is 40 hours. In captive Europe, a 6-day week is required by law which implies 46 to 48 hours as the minimum.

With certain exceptions, the seven captive countries of Eastern Europe had predominantly peasant economies down to the end of World War II. As in the Soviet Union, a large percentage of the labor force is engaged in agriculture. (A large proportion of the population of the southern countries of independent Europe is also engaged in agriculture. In northwestern Europe, on the contrary, agriculture generally employs smaller proportions, while in the United States only 11 percent of all employed persons are so engaged.)

The additional manpower needed to carry out the industrial plans of these sovietized countries has been drawn primarily from the pool of handicraftsmen and impoverished farm workers. Strong mobilization measures have been enforced, and women and minors have been forced by economic pressure to enter industry, trade and office work. Recent estimates indicate that as many as 8.5 million people in the captive countries are now engaged in industrial employment.

Emphasis upon heavy industry has been accomplished at the expense of the production of consumer goods. The effect on the peas-

ants who have been transferred from agriculture to industry often has been severe. The lost advantages of living in the country, it has been stated, have not been compensated by the purchasing power of their wages in the cities. Their wages often are too low to sustain a minimal level of living by American standards.

It did not take long, after they fell into the Soviet orbit, for the captive countries to reach conditions of near-total labor mobilization. Skilled workers have been so scarce that even in relatively well-equipped industries production has been low, judged by western standards. The undertraining of youth was another heritage of war, which is still felt in terms of low labor productivity.

One important, but frequently overlooked, aspect of rural societies, such as those in the Soviet orbit, is underemployment. Because of the manner in which the sovietized governments report unemployment, it appears that there is no such phenomenon in any of those countries. The fact seems to be, however, that absenteeism, together with worktime effort spent in seeking the necessities of life through a maze of bureaucracy, contributes to a sort of "planned economy" underemployment. It is impossible to measure such underemployment but it is probable that it is considerable.

Forced labor, as differentiated from forced settlement or any of the other punitive labor measures, undoubtedly has involved several million persons in the Soviet Union at any one time. The numbers involved in East Europe are even more problematical. However, it is clear that exploitation of otherwise untapped resources in vast areas of the Siberian north and far east, carried out under the MVD, depends upon the use of concentration-camp labor.

PROJECTIONS FOR WESTERN EUROPE

The population of Western Europe alone is considerably greater than the population of the Soviet Union. If the non-OEEC countries are included in the comparison the population of independent Europe is even greater than the total population of the Soviet Union and all the captive Eastern European countries combined. Before the war the population of the OEEC countries totaled 247 million. By 1954 it had reached almost 280 million.

The Economic Commission for Europe has called attention to the widening of the gap between the level of economic development in the industrialized regions in northern Europe (where industrial growth has been rapid and unemployment and underemployment have gradually been eliminated) and that in southern Europe where industrialization has been hampered by poverty, population pressure, and unemployment. The Commission estimates that population trends over the next decade probably will be such as to result in a further widening of this gap.

In the highly industrialized countries of Western Europe, by way of contrast, the rate of increase in the population of working age is already lower than in the southern countries and it probably will decline even further. It is probable, for example, that in the United Kingdom the working population will become about as stable as the French population is now and, unless there is a new migration wave from the East, the working population of Western Germany will increase more slowly than heretofore.

According to the Economic Commission for Europe, there will be far greater possibilities for expansion of industrial output in Western Europe, notwithstanding smaller increases in the working-age population, than in southern Europe, where population pressures make such expansion more urgent. If, however, industrial production should lag in northwestern Europe, the situation in southern Europe will be even more serious since that area depends so heavily upon exports of raw materials and foodstuffs to the northern countries.

PROJECTIONS FOR THE SOVIET UNION

It is estimated that the population of the Soviet Union is increasing at about 1.5 percent per year. Estimates of the population of the Soviet Union in 1970 range from 244 million to 282 million. In the next 20 years, the entry of males into the employee category will at least double in number. The increase in the nonagricultural labor force (both male and female) during the decade 1950–60 may not be as much as 50 percent, even if the armed forces remain as large as at present.

These projections seem to indicate that the population of the Soviet Union will not equal the present size of the population of the OEEC countries until 1970. The projections also indicate that about the same percentage of the population of Western Europe will be in the working-age group 15–64 as in the Soviet Union (66 percent in comparison with 67 percent).

Direct comparison of these figures is subject to some qualification, however. In the first place, apparent equality may not be reflected in the proportion of persons engaged in actual production (especially marked in the case of women); and the potentialities for unemployment and underemployment in the Western European countries, particularly in southern Europe, should be taken into account. Also, the level of general economic development will be important.

Some interesting projections have been made [2] of the future growth of the working-age groups (15–54 years) of the Soviet Union for the period ending 1970. Death rates are generally low and probably will not change greatly, assuming no major war.

The projections indicate that for the period 1950–70 the total number of persons in this age group in the Soviet Union will increase 28 percent. In the United States an increase of 22 percent is indicated. The margin between the two countries will be greatest in 1970 with 146 million workers aged 15 to 54 in the Soviet Union compared with 103 million in the United States.

It should not be inferred, however, that the relative number of workers is the sole criterion of labor input, as far as the economy as a whole is concerned, any more than that the number of males in the prime military age bracket is the sole criterion of comparative military strength. The low quotient of machine-power per worker in the Soviet Union in the past has resulted in a percentage increase in total output only slightly in excess of the percentage increase in the size of the labor force. The United States, on the other hand, has increased the productivity of American industrial workers by half

[2] Thanks are due Eugene M. Kullischer and Michael Roof for permission to use these data.

in the past 15 years and there is no apparent reason why this trend should not continue.

PROJECTIONS FOR THE CAPTIVE COUNTRIES

The population of the captive countries of Eastern Europe as a whole (91.6 million in 1952) apparently will not reach its prewar level of 96 million before about 1956. By 1970 the regional total should reach about 99 million.

A striking projection is the comparatively low proportion of population that will be included in the working ages, 15 years and over (slightly over 62 percent in comparison with 66 and 67 percent for Western Europe and the Soviet Union, respectively). The principal reason for this forecast is the expected continuation of higher birth rates in the eastern countries, which means a population containing a relatively high proportion of children. This is in marked contrast to the "aging" of western populations.

Eastern European countries, whose economies (except for the special case of Czechoslovakia) have vegetated in conditions not unlike those prevailing in parts of southern Europe, are making a concentrated effort to escape stagnation by rapid industrialization. The reports of the Economic Commission for Europe indicate that, although this industrialization has abolished much urban unemployment, it has not made much of an impression upon "surplus" manpower in the rural regions.

The population of the Soviet bloc appears destined to outgrow that of independent Europe, thereby narrowing the difference in population between it and the West. Trends in age structure may also be more favorable to the Soviet bloc, because of forthcoming gains in the Soviet Union. Increases in productivity of western industrial labor forces, and extension of working life, seem the likeliest means by which these gains may be offset.

Chapter II. Agriculture and Food Supply

Inadequate output and low productivity per man in agriculture are restraints upon economic development in the Soviet bloc. They are also significant restraining factors in France and the Mediterranean countries, but not in northwestern Europe nor the United States.

AGRICULTURAL PRODUCTION

European agriculture was seriously dislocated and disorganized by the war, even though the damage which it suffered was less than that suffered by certain other sectors of the economy. Economic and financial aid from abroad—under lend-lease, UNRRA, and the Marshall plan—compensated for some of the more serious deficits in food supply and assisted in rehabilitating the agricultural production plant.

Available statistics suggest that there has been a remarkable recovery over wide areas in European agriculture since the early postwar period, but a serious lag in the captive area. From the comparatively low levels of wartime and early postwar years, Soviet agriculture has recovered to a level little, if any, above that of prewar.

Independent Europe

Agricultural production in Western and Southern Europe in 1947–48 was only about four-fifths as high as it was before the war. Between 1948 and 1950, however, owing in part to the foreign-aid program, it recovered rapidly. By the close of 1950–51 gross agricultural production in independent Europe was about 15 percent higher than it was before the war and so had regained the approximate per capita level of prewar.[3] Livestock production kept pace and, by 1950–51, was 10 percent higher than before the war (1934–38).

Indexes of agricultural production in OEEC countries

Period	Total net output for human consumption	Total net output of livestock products
Prewar	100	100
1947–48	86	80
1948–49	97	88
1949–50	106	103
1950–51	114	110
1951–52	117	113
1952–53	122	118
1953–54 (preliminary)	129	123

Since 1950–51, however, the rate of agricultural expansion has slowed down. According to the Food and Agriculture Organization, agricultural production in northwestern Europe increased by 2 percent in 1952–53, more than keeping pace with the rate of population growth.

[3] Prewar, in this discussion of agriculture, unless otherwise indicated, refers to 1934–38. These data are from the OEEC; data from the FAO on agricultural production tend to be somewhat lower.

In Mediterranean Europe, agricultural production has tended to lag and crop yields, on a per-hectare basis, are still below the prewar level. The highest rate of increase in gross agricultural production was in Turkey where output in 1953–54 was 70 percent higher than before the war, but that country in 1954 suffered a severe setback. Other countries in which production increased by 20 percent, or better, as compared with prewar according to the OEEC preliminary figures for 1953–54 were:

	Percentage increase		*Percentage increase*
United Kingdom	54	Portugal	28
Belgium	44	Italy	24
Denmark	42	Netherlands	24
Greece	30	Norway	24

Countries in which agricultural production increased by 10 to 20 percent were:

	Percentage increase		*Percentage increase*
Germany (Western)	19	Switzerland	18
Sweden	19	Austria	13
France	18		

Ireland, Spain, and Yugoslavia showed increases of less than 10 percent.

(These increases, of course, do not indicate the absolute levels of production from which recovery began.)

Notwithstanding such vicissitudes of nature as the exceptionally wet harvesting season in the summer of 1954, increases in agricultural production have been gratifying for much of the area and domestic production per capita is above prewar. Famine is nowhere in sight in independent Europe.

Nevertheless, independent Europe is, and undoubtedly will continue to be, a food- and feed-deficit area. But this is not too important as long as the New World is faced with continuing surpluses of several important foods, the sealanes remain open, and trade arrangements continue to function.

Agriculture in independent Europe, thanks to wider adoption of modern technology, appears to be nearer to its practical ceiling of production than are either Eastern Europe or the Soviet Union. That is, the base from which advances will be made is already comparatively high in parts of the West, raising the question of biological limits as well as diminishing returns, economically.

The Soviet Union

Based on official statements, which in the opinion of American students of Soviet agriculture overestimate the degree of recovery, gross agricultural production in the Soviet Union was about 6 percent higher in 1949 than in 1940. In 1950 it was 14 percent higher than 1940, but by 1952 it had dropped to about 110 percent of the 1940 base.[4]

One authority on the Soviet Union (Timoshenko)[5] says that—

* * * in any event agricultural production is the tightest bottleneck for Soviet economic expansion and one that may become an important obstacle to further rapid industrialization of the Soviet Union.

[4] These are official data. Some American experts on the Soviet Union consider them overoptimistic and exaggerated; they hold that such production is little, if any, in excess of the prewar level.

[5] Timoshenko, V. P., New Soviet Economic Plan: Its Agricultural Aspect, Journal of Political Economy, December 1953, pp. 489–490.

Some observers conclude that Premier Malenkov's speech to the Supreme Soviet in August 1953 and several other speeches and follow-up pronouncements indicate that the Soviet Union is reorienting its policy with regard to agricultural production. Others see in the pronouncements and developments merely another of the several panaceas which have come along year after year, in an attempt to obtain larger amounts of badly needed production, despite the inefficiency of the collective farm system without changing and correcting it.

Foreign observers and students of Soviet agriculture have doubts as to the likelihood of success of the new agricultural program, particularly as to whether it can be done on time. Creating considerably larger amounts of food for the population, in itself, probably is an achievable goal. But whether, at the same time, an abundance of raw materials for light industry can be created is doubtful.

Captive Europe

Recovery of agricultural production in the captive countries of Eastern Europe continues slowly. On a per capita basis, output is thought to be lower than before the war. Production of livestock continues to lag behind other production.

Before the war, Eastern Europe was a moderate food-surplus area, with the bulk of the population engaged in agriculture. As a matter of governmental policy, until recently, most of these countries have placed such importance upon industrial development, particularly heavy industry, that they have been draining labor away from agriculture in order to divert it into industry. Incentives to increase agricultural production apparently have been discouraged by high taxes and required deliveries.

AGRICULTURAL RESOURCES

Land

In total territory the Soviet Union, 2.2 billion hectares (or 5.4 billion acres [6]), is immensely larger than all Europe, minus European Russia, about 500 million hectares (1.2 billion acres), and is about 10 times larger than Western Europe. In fact, the area of the Soviet Union is not much smaller than the total area of all of North and Central America (2.4 billion hectares or 5.9 billion acres). The area of continental United States is only 783 million hectares (1,935 million acres).

Total land area, however, is not synonymous with agricultural land resources, either present or potential. With regard to arable land only, the relative areas in 1947 were as follows:

Soviet Union: 225 million hectares, including fallow land and orchards (556 million acres).

All the rest of Europe: less than 150 million hectares (371 million acres), of which less than 40 million hectares are in captive Europe.

United States: 177 million hectares (437 million acres).

[6] One hectare is equal to approximately 2.47 acres; 640 acres, or about 259 hectares, equal 1 square mile.

The possibilities of increasing the supply of arable land through drainage, clearing, and other improvements, are greater in Eastern Europe than in Independent Europe. There is considerable unproductive and uncultivated land in Eastern Europe which, through drainage projects and irrigation, could be transformed into arable soil. Allowing 1 hectare per person, and 5 persons per family, it is estimated that this would be sufficient to accommodate 1.5 million peasant families. Of the total, more than 1 million such hectares of land are in old Poland (now Soviet territory).

It is in the Soviet Union, however, that increasing the supply of arable land is most important in estimating the future. The 8.5 million square miles of Soviet territory account for roughly one-sixth of the total ice-free land surface of the earth. About 30 percent of the territory of the Soviet Union is either so cold, or so dry, that it is barred from agricultural use. Another 29 percent of the area is so deficient in soil quality as to be unusuable. It has been estimated by the economist Colin Clark that the Soviet Union has only about 70 percent as much "standard farmland" as the United States. Some of the forest land (29 percent of the total), however, could be converted to agricultural use, as could some of the dry steppe.

Agricultural labor

In both Eastern and Southern Europe, as well as in the Soviet Union, agriculture requires the labor of fully one-half the total population. In northwestern Europe, on the other hand, less than one-fifth of the population is so engaged, and in the United States less than one-sixth. Furthermore, yields and labor efficiency in agriculture are so low in the Soviet Union and in Eastern Europe that the output is insufficient to provide adequately for the needs of the population. Meanwhile, living standards make only slow progress. Although that population appears to constitute a large reservoir of possible industrial labor, its availability for such purposes is slowed down by inability to produce the agricultural output needed throughout the economy. Before the war, the productivity of the average Soviet farmworker was estimated at about one-fifth that of the average farmworker in the United States.

LAND UTILIZATION

In the countries of Eastern Europe there is still some possibility of bringing new land under cultivation. West of the Iron Curtain, however, in order to increase the supply of agricultural land it is necessary to take land away from other uses. For example, in the United Kingdom permanent grasslands have had to be broken up in order to plant potatoes and rotation grasses.

Eastern Europe has been curtailing the growing of grain in favor of industrial crops. The production of sugar beets, for example, has been expanded in many areas since the war, particularly in East Germany.

In the Soviet Union increased emphasis in the early postwar period was given to the sowing of grasses and other nongrain feed crops. More recently there has been increased emphasis on grains for food and feed. Crop, as well as livestock, yields probably are no greater than they were before the war. In fact, there is some reason to believe that they are lower.

AGRICULTURAL ORGANIZATION

With the exception of the Soviet Union, the peasant and the family farm are still basic in the economic organization of the area, though collectivization has proceeded part way in Eastern Europe.

Independent Europe

In much of independent Europe greater efficiency in agriculture is hampered by the following three major organizational problems:

1. A high degree of farm fragmentation. Farmers waste much time in traveling from the villages in which they live to numerous small fields consisting of scattered strips, or bits, of land. This system makes the use of modern agricultural machinery difficult.
2. The autarchy favored by certain governments in some degree tends to perpetuate inefficient production and to decrease the incentive for self-help and increased efficiency.
3. The narrowness of the market. Wide markets make for greater efficiency. Thus far, attempts to integrate the markets for the agricultural products of Western European countries have not been successful.

Eastern Europe

Prior to World War II, agriculture in Eastern Europe (excepting Hungary, where large estates remained dominant) was based upon a peasant economy. Since World War II, the countries of Eastern Europe have been shifting to the Soviet type of agricultural organization. Unlike the Soviet Union, however, private property still prevails in most of these countries, even though the peasant owners are tied into the planned economy by a system of compulsory deliveries. Somewhat the same problems, particularly of lagging production of livestock, exist as in the Soviet Union.

The Soviet Union

Until recently, the goal of the Soviet Union has been to organize, capitalize, and develop the agricultural economy so as to release millions of farmers for work in industry and, at the same time, to provide food for the cities and raw materials for industry. The present organization of agrarian collectivism began as early as 1928 with the launching of the first 5-year plan.

Soviet agriculture is organized along socialized lines, although alongside the socialized sector is a relatively small private sector.

The bulk of the socialized sector consists of about 90,000 collective farms (kolkhozy) and it is on these farms that 70 percent or more of all agricultural products are grown. Associated therewith are the machine-tractor stations, each serving several collective farms with such major machinery as is utilized on a custom-work basis. These stations are also a powerful arm of Soviet assistance, management, and control.

Before the war there were as many as 254,000 collective farms in the Soviet Union. Since 1950 there has been intensified consolidation of the collectives so that the number has been reduced.

Also, within the socialized sector are about 5,000 state farms (sovkhozy) which are operated by hired workers and which produce more than 10 percent of total agricultural output. Of minor overall

importance are a few miscellaneous farms that are operated as subsidiaries to industrial enterprises, hospitals, schools, et cetera.

The collective farms are nominally cooperatives formed by the farmers in particular areas either voluntarily or under compulsion. They operate on land belonging to the state and in theory they agree to operate cooperatively by electing a manager and by sharing the work and the proceeds. In actual fact, very little discretion is left to the membership. The individual farmer contributes assigned workdays and receives a residual of the physical product after payments to the MTS, etc., as well as a share of the money income derived from the sale to the state of fixed quantities of the product at fixed prices.

The private sector, which is much smaller than the socialized sector, consists of the many small plots allocated to collective farmers (kolkhozniki) who devote their spare time as individual producers to such crops and livestock as can be produced on small plots. Because of intensive labor applications they are relatively quite productive and, although not much quantitative information is available regarding their output or its use, they are thought at times to account for as much as 20 percent of some vegetable and livestock products reaching the market. There are also a few peasants who remain as independent farmers (edinolichniki) on small plots of state land.

AGRICULTURAL TECHNOLOGY

Western Europe is far more abundantly supplied with tractors, on either an acreage or a manpower basis, than either Southern or Eastern Europe. In the United Kingdom, in fact, the proportion of tractors is about the same as in the United States. But some other types of equipment highly useful in conserving agricultural production, especially refrigerated storage, is relatively scarce by United States standards in most of Western Europe.

Of the Eastern European countries, only Finland, Czechoslovakia, and Eastern Germany have such equipment in somewhat the same abundance, relative to land area and manpower, as do the countries of the West. The Soviet Union has more tractors per agricultural worker than does Eastern or Mediterranean Europe, although this is not the case with respect to the ratio of tractors to land in crops. However, Soviet tractors are probably used much more intensively.

The substitution of tractors for draft animals is important, not only because it economizes labor, but also because it makes possible more timely carrying out of agricultural operations. It also releases land previously devoted to the raising of food for work animals to other agricultural uses.

There has been a substantial increase in the use of chemical fertilizers in Europe since the war. In parts of Western and Mediterranean Europe some of this increased use can be attributed to the receipt of direct economic aid from the United States under the Marshall plan. The fact is, however, that even in some areas that have not been recipients of aid, such as Spain and Finland, there also has been a substantial increase in the use of fertilizer.

In Eastern Europe the use of fertilizers has not increased as rapidly as in the West. It is reported that in the Soviet Union practically

the entire supply of mineral fertilizers, considerably enlarged as compared with prewar, has been used in connection with industrial crops plus potatoes and vegetables. Southern and Eastern Europe also tend to lag, relative to the West, with regard to certain other aspects of agricultural technology, such as the scientific development of animal and plant genetics, crop rotation, and weed control.

3. *In neither the Soviet bloc nor the Western countries do shortages of minerals appear to be limiting factors to economic growth so long as certain scarcer items can be obtained from outside. Their geographical distribution and often their quality are better in the West than in the East.*

MINERALS

The countries of Independent Europe, particularly those in the area of the Mediterranean, produce substantial quantities of important minerals, including mercury, sulfur, tungsten, zinc, lead, copper, and bauxite.

Independent Europe, Yugoslavia, the Americas, Australia, and Africa, considered together, are in a strong position relative to the Soviet bloc with regard to nearly all minerals, whether considered on an absolute or on a per capita basis. The United States, a major importer and hence dependent on the sealanes for a few essential minerals, is nevertheless strong in its own production and outstanding in its processing facilities and use.

The Soviet Union is in a strong surplus position with regard to several important minerals, including chromite and manganese. The overall situation, however, appears to be one of decided imbalance.

Nevertheless, the Soviet Union has much territory yet to explore. Such explorations are particularly important in the long run. In the shorter run there is the fact of technological lag, not only in geophysical exploration, but also in mineral recovery and ore dressing as well as in efficient metallurgical utilization which, for most items, suggests that the gap between the Soviet bloc and the West is even wider than might first appear on the basis of actual production.

TEXTILE FIBERS

Europe, the world's major importer of cotton, produces very little of that raw material. The United States produces about 40 percent of the world crop and is the leading exporter of raw cotton. Soviet production has been pushed diligently, to a level about one-third that of the United States. Nevertheless, both the Soviet Union and captive Europe have continued to import additional amounts and the Soviet is reported to export cotton also to captive Europe.

Because of its extensive manufacture and exportation of finished goods, Western Europe is the world's major raw wool importing area. Eastern Europe is more nearly self-sufficing but at a lower level of consumption. Both the Soviet Union and the United States import substantial amounts of raw wool; the U. S. S. R. now produces about one-fourth more than prewar and United States production has declined by about one-third compared with prewar.

Both the West and the Soviet bloc import jute. The Soviet bloc is a large producer of hemp and flax, but production is below prewar. The production of rayon (and some other synthetic fibers) has increased three or four fold in the West as compared with prewar. There is little evidence available on this matter respecting the Soviet bloc.

FOREST PRODUCTS

With the exception of the Northern countries and Austria, Western Europe (including the Mediterranean countries) is a timber-deficit area. By 1953, in spite of reconstruction needs, it had barely managed to regain the prewar level of sawn wood production.

Historically, Western Europe secured virtually all its needed imports of softwood forest products from the Soviet Union, the Baltic countries, Finland, Sweden, and Austria. Since the eastern part of this trade has been practically cut off, there has been a shortage of forest products in Western Europe.

Before the war the forest reserves of the Soviet Union were almost twice as large as those of Western Europe and the United States combined and there is no reason to believe that they are much smaller now. Because of climatic conditions, however, the trees grow slowly and many of the reserves are poorly located relative to population and industrial centers of the Soviet Union. Those reserves in the basins of rivers flowing into the Arctic Ocean and open only during a short summer season offer major problems of accessibility.

Production of *woodpulp*, which has increased substantially in the United States since before the war, has doubled in both the Soviet Union and captive Europe. In Western Europe it has increased slightly. Today, as before the war, Europe is a most important supplier of pulp and its products to other regions. Its pulp and paper industry suffered badly during the war and although it recovered rapidly after the war, the output is modest compared with that of North America.

Chapter IV. Steel

Although the Soviet Union has done a remarkable job in increasing its steel capacity, it has not been able to surpass the production record of the Western countries, notwithstanding primary emphasis in this sphere. Tonnage of steel produced in the Soviet Union continues to grow at about the historical rate in the United States 40 years earlier.

The major emphasis of the Soviet economy, and of the captive countries of Eastern Europe, has been on basic "heavy" industry. The record of the past 25 years seems to indicate that the countries comprising the Soviet bloc have reduced Western Europe's lead in heavy industry by about one-half and its lead in consumer industries possibly by one-fourth.

Nothing is produced without steel and the availability of steel serves as a good indicator of the industrialization of an economy. Outstanding characteristics of steel production in the Soviet bloc countries are rapid increase of output and progressive depletion of high-grade resources near existing centers of production. The West also has problems of depletion which are being met from outside sources with the advantage of relatively low-cost water shipment. The most notable development in the Western European industries is their recent reorganization in the six-nation pool of the Coal and Steel Community (the Schuman Plan).

PRODUCTION

In the countries constituting the European Coal and Steel Community there has been little increase in steel production since 1929. In fact, there was a decline from 1952 to 1953. The shortfall between actual and anticipated production for 1953 was considerable in West Germany, France, the Saar, and Belgium-Luxembourg. Because of a slackening of demand for steel and certain types of steel products in these countries, works are no longer operating at capacity.

In the United Kingdom and the United States there was a steady increase in steel production along with the installation of large new capacities. Anticipated production was reached in the United Kingdom in 1953 but in the United States production was a little below advance estimates. Smaller Western European producers, including the Netherlands, increased their production, although anticipated goals were not always attained.

TABLE 8.—*Production of crude steel: Western Europe, Eastern Europe, the Soviet Union, and the United States*

[Thousand metric tons]

	1929	Actual			Anticipated	
		1949	1952	1953	1953	1960
Western Europe:						
Coal and Steel Community [1]	[2] 35,656	28,686	41,816	39,661	46,550	56,000
Other [3]	[2] 12,251	19,664	21,557	[2] 23,067	23,455	28,550
Total	[2] 47,907	48,350	63,373	[2] 62,717	70,005	84,550
Eastern Europe	[2] 5,564	6,976	10,747	[2] 12,350	12,850	16,950
Soviet Union [4]	5,003	23,300	34,500	38,000	38,000	60,000
Total Soviet bloc	[2] 10,567	30,276	45,247	50,350	50,850	76,950
Ratio Soviet bloc to Western Europe (percent)	22	63	71	80	73	91
United States	57,336	70,742	84,511	102,000	108,000	117,000
Total West	[2] 105,243	118,092	147,884	[2] 164,717	178,005	201,550
Ratio Soviet bloc to the West (percent)	10	26	30	31	29	38

[1] Includes France, German Federal Republic, Saar, Belgium, Luxembourg, Italy, and the Netherlands.
[2] Estimate.
[3] Includes Austria, Denmark, Finland, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and Yugoslavia.
[4] Includes Czechoslovakia, Eastern Germany, Hungary, Poland, and Rumania.

Source: U. N., ECE, The European Steel Market in 1953, Geneva, January 1954.

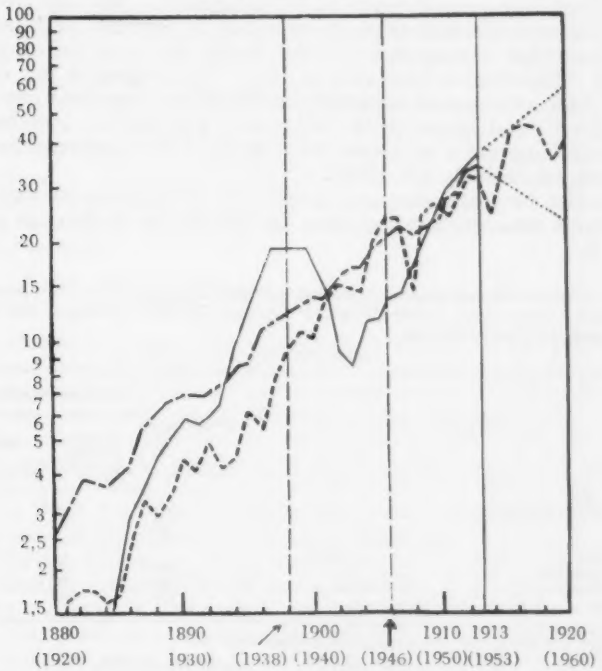
The increase in steel production which has characterized the Soviet Union and East European countries since the end of the war was continued in 1953. On the basis of current reports, it appears that in the Soviet Union, Czechoslovakia, and Yugoslavia the planned figures are likely to have been attained but that in Poland, East Germany, Hungary, and Rumania, production was somewhat below the planned goals. The accompanying chart shows that the Soviet Union is about 40 years behind the United States and the leading Western European producers in terms of steel output.

There is, in fact, a remarkable similarity between the tonnage growth of steel output in the Soviet Union since 1920 and the rate of growth of steel production in the United States and Western Europe between 1880 and 1913. If the Soviet Union should succeed in producing 60 million tons in 1960 its production will be greater than that attained in the United States in 1920 and the 40-year lag will be narrowed. If, on the other hand, Soviet steel production follows the line of what appears to be the longtime trend its production will be about equal to production in the United States in 1920.

CHART I

CRUDE-STEEL PRODUCTION IN THE UNITED STATES AND FOUR LEADING EUROPEAN STEEL-PRODUCING COUNTRIES (1880–1920), AND THE SOVIET UNION (1920–60)

[In millions of metric tons, logarithmic scale]



-------- USA 1880–1920
— · — 4 leading European producers 1880–1920 (Belgium/Luxembourg, France/Saar, Germany and U. K.)
——— U. S. S. R. 1920–60.

NOTE.—European production in 1913 has been connected up with production in corresponding postwar territories in 1920.

Source: United Nations, Economic Commission for Europe. The European Steel Market in 1953, Geneva, January 1954.

In reading the chart, the tendency of the logarithmic scale to flatten the line for the more recent years should not be allowed to obscure the fact that United States production for 1953 would be too high to be shown on the chart or that total West European production in 1953 exceeded the projection for the Soviet Union in 1960. Nor should the dotted line for projected Soviet production be related in any way to the dotted line which indicates wartime destruction in Europe between 1913 and 1920.

There is no reason to believe that the Soviet Union will be more able than any other country, notwithstanding concentration of investment on heavy industrial production, to avoid the shape of the general growth curve which is characterized by declining rates of increase.

COMSUMPTION

Per capita consumption of steel in Western Europe stood at 195 kilograms in the Coal-Steel Community countries in 1953 while the other countries of the region used 143 kilograms per capita, resulting in a Western European average of 169 kilograms. The captive countries of Eastern Europe, taken as a whole, consumed 141 kilograms per capita which was much below the Soviet figure of 187 kilograms for 1953. The Soviet bloc average was 171 kilograms per capita. None of these averages of apparent consumption comes near consumption in the United States of 634 kilograms per capita. Sweden and the United Kingdom come closest with levels of 306 kilograms and 323 kilograms, respectively (in 1953).

In the last 24 years, the most rapid rate of increase in steel production and consumption has been in the Soviet Union, as shown in table 9.

TABLE 9.—*Production and apparent consumption of steel in 1953: European Coal and Steel Community, other Western Europe, Eastern Europe, the Soviet Union, and the United States*

[Index: 1929=100]

Country[1]	Production	Apparent consumption	
		Actual tonnage	Per capita
Western Europe:			
Coal-Steel Community	111	129	109
Others	188	181	150
Total	131	147	124
Eastern Europe:			
Captive countries	222	212	202
Soviet Union	760	718	614
United States	178	191	146

[1] For countries included in the various groups see footnotes to table 8.

Source: U. N. ECE. The European Steel Market in 1953, Geneva, January 1954.

It should be emphasized that the level of steel production and consumption in the Soviet Union at the beginning of this period was very low. Steel consumption per head, while near the European average in the Soviet bloc, is still considerably lower than in the major producing countries of Western Europe. Furthermore, steel production, which is a good index of the trend of consumption over a long period of time, has increased only slightly faster in the Soviet Union than in Western Europe and the United States *during the comparable period of rapid initial industrial expansion.*

On the other hand, the proportion of steel output which the Soviet Union can devote to governmental purposes probably will remain higher than in the West where consumer durable goods require a larger proportion of output, even during time of war. The classic case of Japan during World War II shows that governmental control of even a small steel industry can be quite effective, for a time at least, even in comparison with a much larger industry in countries where civilian consumption is heavy.

STEEL CAPACITY

High furnace heats, badly prepared refractories, ashy cokes, and similar detriments to good smelting practice limited the prewar utilization of steel capacity in Soviet mills. According to Shimkin,[7] pig iron output in 1937 reached 88 percent of nominal capacity, steel output only 86 percent of capacity, and rolled iron and steel products about 75 percent of capacity. To all intents and purposes, postwar production has equalled practical capacity, comparable to the flow basis on which United States capacity is currently measured. The United States had indicated capacities for steel ingots and steel for castings of 90 million metric tons at the beginning of 1950, 107 million metric tons in 1953 and 113 million metric tons by the beginning of this year. Percentage of capacity used has been low at times, but not for the technological reasons which restrain the Soviet drive to use capacity in full.

RESERVES OF RAW MATERIALS

Supplies of rich iron ore available to producers in independent Europe, particularly from Sweden, have recently been greater than their consumption. The leaner ores are under the immediate control of the producers and no difficulty of supply seems to exist. Coke supplies are now sufficient to meet demand, although the decline in the production of pig iron in 1953 contributed to the easing of the situation. Most scrap is plentiful but the ratio of pig iron to scrap in West European furnaces has been changing as a result of earlier predictions of permanent scrap shortages.

The Soviet Union has plans paralleling those of the United States for extending its supplies of raw materials. High-grade ores near existing centers of production are approaching depletion on both sides. Our producers will have the advantage of comparatively cheap, long hauls by water from the new ore fields under development in Labrador, Venezuela, and Liberia while the Soviet Union must contend not only with overland haulage but the typical separation by great distance between ore and coal. Krivoi Rog is still the main source of ore. It produced 54 percent of the Soviet output in 1940, providing the basic ore supply for the south and supplementary supplies for the central region. It now must provide as well for the steel mills in Eastern Europe. The progressive worsening of Krivoi Rog ore has been a compelling reason to prospect and develop new iron and steel centers outside the south. Local ores are being increasingly substituted in other areas and Soviet technicians are doing intensive work to lower costs and improve quality under the handicaps of poorer local ores and diminishing supplies of good coking coal.

The Soviet steel industry ordinarily consumes relatively little scrap. This is because, industrially speaking, the Soviet Union is a young nation and does not have a large supply of scrap from discarded capital equipment. In the United States such equipment provides about half the scrap consumed by the steel industry. In the

[7] Shimkin, D. B., Minerals: A Key to Soviet Power, Harvard University Press, 1953.

Soviet Union the corresponding share is only about one-fifth. The United States, the United Kingdom, and Germany have in the neighborhood of four times as big a scrap fund in relation to the demand for it as does the Soviet Union.

No area covered in this report seems in danger of running out of raw materials basic to the production of steel. The problem is one of going continually farther afield from the centers of production to find them. The Soviet Union claims enormous iron-ore resources but actual measured and usable reserves cover only a small fraction of these claims. The poverty of Eastern Europe in known reserves of iron ore contrasts with the greater resources of Manchuria and North Korea on the other side of the Soviet Union.

THE OUTLOOK

The countries of the West will maintain a sizable lead in the capacity to produce steel in the foreseeable future. They have the plant, the reserves, the resources, and the trained manpower to meet most expected future demands. The doubt that centers on the loss of markets formerly available to European producers, such as the Asian countries, some of which are striving toward self-sufficiency, is bound up with future demand. Concern in the United States centers on the degree to which defense spending is vital to our steel industry.

In Europe, the creation of the Coal and Steel Community has led to a common market and a move has been made toward the rationalization of the price structure. Moreover, there is some prospect of investment coordination among steel producers. The Coal and Steel Community is subject to a serious limitation of power, however, in that there is little that it can itself do to stimulate demand for steel. East-West trade is not at present of major significance. In the long run, the outlook for increasing indirect steel exports is better than for direct steel exports.

In the Soviet Union, the present trend in ingot production should make possible the fulfillment of the 1955 plan and the Stalin goal, now usually described as the aim for 1960. Continued high investment in the industry is to be expected, but continued expansion depends, to a large extent, upon improved ore preparation and flow of raw materials. Attainment of Soviet goals depends also upon education and training of personnel as well as the volume of capital resources allocated for investment in the iron and steel industry. On the negative side, the main limitation is the worsening quality of Soviet coking coal and iron ore.

THE UNITED STATES AND EAST-WEST BALANCE IN STEEL PRODUCTION

A potential danger in the presentation of regional comparisons such as these is demonstrated by dropping, for a moment, the assumption that present international alinements will continue. Output in British Commonwealth countries and Latin America, on the one hand, and the obscure potentials of Manchuria, China, and North Korea, on the other, though significant, are omitted. Were the United States to stand alone against a Communist world which contained all of Europe and the Soviet Union, its 1953 production of 102 million metric tons of crude steel would be outweighed by the Communist 113

million metric tons. Our theoretical capacity (112.7 million metric tons at January 1, 1954), however, would be equal to that total. By 1960, ignoring the changes in policy and effort that obviously would take place, our anticipated production of 117 million metric tons would be faced by a combined production of 162 million metric tons. That is to say, our production now would equal 90 percent of the combined output of our opponents and in 1960 only 72 percent.

To reverse the imaginary combination of regions, restoration of the captive countries to freedom would give all Europe a present level of 75 million metric tons steel production and in 1960, assuming that present plans for heavy industry were to be retained, a combined capacity of about 101 million metric tons. On this basis, the Soviet Union alone would now have only 51 percent of all European output, and in 1960 would have 59 percent. The relation of the Soviet Union to a combination of Europe and the Unitied States would, of course, be even more unfavorable to her. Other combinations are possible, and more probable than the sweeping realinements imagined, but there is no point in speculating along such lines.

5. Generally speaking, Western Europe appears to be faced with a relative power shortage, arising primarily from difficulties in the rapid expansion of coal output, plus some tightness in generating capacity. There is evidence of increased demand for fuel in liquid forms. Atomic power, if it were to be systematically developed by either Western Europe or the Soviet bloc at relatively low cost, could alter the economic balance between the two areas quickly.

The United States and Canada consumed 40 percent of all the world's power in 1950. Europe consumed about 25 percent and the Soviet Union about 12 percent. In terms of coal equivalent, the energy consumption of the United States and Canada amounted to 1.3 billion tons. In Europe it was 841 million tons, and in the Soviet Union 396 million tons.

The total energy available in captive Europe, both before and since the war, has been about one-third that available in Western Europe. If this supply is added to that available in the Soviet Union, the Eastern bloc as a whole had about three-fourths as large a supply of power as did Western Europe in 1950.

Coal continues to be the major source of power in all three areas.

In terms of present sources of energy, Western Europe seems to be headed for a relative power shortage largely because of increasing difficulties of abundant and efficient coal production. Some experts estimate that Europe will require annually 2 billion tons of coal or its equivalent by 1980. Others estimate only 1,950 million tons for Western Europe in 1975. It is because of this likelihood and the evident difficulties in the way of meeting it from the usual sources that the development of power from atomic energy can be so important. That heavy industry, transportation, and the production of consumer goods generally depend, directly or indirectly, upon inanimate energy is self-evident. What is not so generally understood is that much of the heightened productive efficiency being sought in agriculture, as well as the greater productivity that is coming to rural villages, also are dependent upon power, principally from petroleum and electricity.

The availability of fuel and power resources will, in large measure, determine the achievement of the planned development of the captive countries of Eastern Europe. Not only must these resources provide the energy for local development, but they also must make possible production of the surpluses that are required to be sent to the Soviet Union.

To meet these requirements, the captive area has large resources of fuel and power, including abundant waterpower from the Danube, the Vistula, and other rivers.

COAL

Western Europe produces approximately one-third of all the world's coal. North America now produces about one-fourth, and the Soviet

Union, together with the captive countries of Eastern Europe, produces about one-third. Production of coal in Western Europe appears to be moderately stabilized, whereas in the Soviet Union, with or without the captive countries, production is still increasing. Production in North America has dropped from a higher wartime level to approximately its prewar level.

The near-stabilization of coal production in Western Europe is occasion for some concern, inasmuch as in 1951 and 1952 there was in the OEEC countries alone a difference of about 35 million tons between coal supplies from domestic resources and needs for current consumption and stockpiles. It is probable that this gap will continue into 1956. It can hardly be explained on the basis of comparative cost in view of the repeated failure to meet agreed targets.

The United Kingdom

The coal mines of the United Kingdom are now producing slightly less than the prewar average and 6–7 percent less than in the favorable year 1937. This is a serious situation because the exportation of coal could have contributed substantially to the earning of foreign exchange and because its relative scarcity has set limits upon postwar industrial recovery and expansion.

Between the beginning of 1949 and the end of 1950 manpower in British coal mines declined by about 40,000 workers. Even though it increased by almost 35,000 in 1952, and wages of miners had been increased, production did not increase proportionately. Of great significance is the question of the organization of the British coal industry, including the problem of nationalization. Coal seams in Britain are generally thin and costly to mine. In 1954 coal production was lagging behind demand, forcing the United Kingdom to increase its coal imports, to cut back its coal exports, or to fall short of meeting its industrial requirements for coal.

Notwithstanding these difficulties, total British industrial production increased 7.5 percent on the basis of only a 5-percent increase in coal consumption.

The Ruhr

Before the war the Ruhr was second only to the Pittsburgh region as a coal-producing area. Each month it produced more than 10 million tons of coal, a yearly total 3 times the production of France and more than the entire coal output of the Soviet Union. In terms of equivalent power, it was more productive than all the hydroelectric installations in the world combined. The coal mined there was of high quality and located in thick seams.

Coal reserves in the Ruhr are still enormous. It is estimated that proved commercial reserves at less than 4,000 feet depth would support the past peak rate of production for at least two centuries. Immediately following the war production in the Ruhr fell to about 1 million tons per month, or to one-tenth of normal production. Recovery, however, was rapid though production in 1953 was still short of 1938. But problems still remain. The productivity of labor continues to be a troublesome question. In order to produce slightly less coal than was mined before the war a labor force 45 percent larger than prewar is now needed.

In February 1953 the Coal and Steel Community was successful in bringing about the elimination of tariffs, import and export quotas,

and some discriminations regarding transport charges within the common coal market. Although the maximum price of Ruhr coal was reduced, it is still costlier to other countries of the Coal and Steel Community than coal imported from the United States.

The Soviet Union

The aggregate reserves of coal in the Soviet Union are estimated at more than a trillion tons. Something like 90 percent of this coal is in the east, whereas about 90 percent of the iron ore and the population are in the western part of the country. Production appears to have increased by about 75 percent between prewar (130 million tons of coal and lignite in terms of coal equivalent) and 1950. Upon occasion the more westerly Donetz Basin and the Moscow Basin have exceeded production goals.

Although the larger proportion of coal reserves are concentrated to the east, the reserves in the European part of the Soviet Union are substantial.

The Silesian area

About 80 percent of the coal resources of captive Europe are in the Silesian-Ostravan area, formerly divided among Germany, Poland, and Czechoslovakia but held now by the 2 last-named countries. A decline in production during the war was rapidly overcome after the war was ended. By 1950 production reached 87 million tons (about the same as in 1937) of which about four-fifths was produced in what is now Poland. Since 1948 control of the mines has been from Moscow. The labor force, however, is still mostly Polish.

The target for coal production in captive Europe in 1955 is 133 million tons.[8] If this goal is reached, it will exceed present and prewar production in the Ruhr, and present production in the Donetz Basin. It would, however, still be slightly less than wartime production in the State of Pennsylvania.

The problems of coal production in this area do not revolve around resources, but rather around questions of capital investment and labor morale. Always present in coal mining is the problem of how to apportion labor between current output and the preparation for future production in the way of exploration, cutting new faces, et cetera.

The most important single question which cannot be answered clearly is whether this area can meet the internal demands of the captive area, provide necessary exports to the Soviet Union, and still continue to export about 10 million tons of coal to independent Europe. It is significant that shortages of coal and electric power are reportedly major factors in the failure of some industries in captive Europe to meet their official production quotas.

PETROLEUM

Petroleum is the most versatile and most sought after fuel resource. Western and Mediterranean Europe, which is a large petroleum-consuming region, has practically no petroleum resources of its own. In fact, Europe as a whole produces less than 2 percent of all the world's crude petroleum and consumes about 11 percent. Western Europe does control substantial production overseas.

[8] Peak production of 106 million tons was reached in 1943 by the Germans under the spur of war needs.

The Soviet Union, on the other hand, is the third largest petroleum producer in the world today. That country also has been a significant exporter of petroleum.

American petroleum technicians and American machinery did much to make possible the modernization of the oil refining industry in the Soviet Union between 1928 and 1940. As late as 1928, according to Schwartz,[9] the Soviet Union did not utilize the petroleum cracking process for refining purposes but depended upon direct distillation. By 1937, however, almost two-thirds of all the gasoline produced in the Soviet Union was by the cracking process. Gasoline is also produced synthetically in the Soviet Union but the size of the industry is a secret. Pipelines, also, have been expanded.

Nevertheless, there are elements of weakness in the oil industry of the Soviet Union. These are in the nature of inadequacies in technology, exploration, drilling, and operations rather than in resources. Even though ascertained and developed oil reserves are small, oil resources remaining to be developed undoubtedly are very large. One obvious difficulty is that the developed areas are not well located relative to consuming areas.

Because of these facts, recent developments in petroleum production in the captive countries of Eastern Europe are significant.

Early in the 1940's Hungary became one of the few European countries having an exportable surplus of oil. Also, by 1950 it became clear that the part of Austria controlled by the Soviet Union was producing up to 900,000 metric tons of petroleum a year and exporting about one-half of it.

When the Communists took over the Rumanian petroleum industry in 1947 production amounted to about 3.8 million tons per annum, or less than one-half the production in 1936. Recent reports indicate that by 1951 production had returned to its 1936 level, with most of the output being sent to the Soviet Union.

The Middle East possesses more than half of the known petroleum reserves of the world, amounting to about 62 billion barrels in 1953. Because petroleum is power, and because of the vulnerable position of Western Europe with regard to it, the knotty political and economic problems of the Middle East acquire an importance to the West far greater than would otherwise be the case.[10]

ELECTRIC POWER

Western Europe consumed about 300 billion kilowatt-hours of electricity in 1953, in comparison with consumption of 133 billion by the Soviet Union and 513 billion by the United States. Captive Europe used about 60 billion kilowatt-hours. The development of electric power production has been and continues to be an important objective of the Soviet Union.

Although production of electricity in the world as a whole increased at the rate of 6 percent per annum during the 1929–50 period, the rate of increase in Europe, already one of the most electrified areas of the world even as early as 1929, was slower.

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[9] Schwartz, Harry, Russia's Soviet Economy (2d edition, 1954), pp. 234 ff.
[10] See Part Three, Staff Paper L on Petroleum and the Middle East.

A shortage of electric power is one of the difficulties besetting Western Europe. There is, of course, considerable developed hydroelectric power in Norway, Switzerland, Italy, and France. Substantial potential resources remain for development.

During the same 21-year period (1929–50) the output of electricity in the Soviet Union increased thirteenfold, from the extremely low starting base of only 5 billion kilowatt-hours. Between 1937 and 1950 production of electricity in the Soviet Union increased between two- and threefold. Between 1950 and 1953 production increased by about 13 percent per annum. The stated Soviet goals call for similar increases in 1954 and 1955.

The hydroelectric potential of the Soviet Union, which is substantially larger than either all of Europe or all of North America, has been utilized relatively slightly. Thermal sources appear to be not only more used but also to have been more rapidly expanded relative to prewar. The reasons for this failure to develop hydroelectricity are not altogether clear. It may be because of considerations of location or it may be because of the difficulties of planning and erecting large hydroelectric stations.

In the captive countries of Eastern Europe electricity is relatively underdeveloped, about 60 billion kilowatt-hours in 1953 versus more than 300 billion kilowatt-hours in Western Europe. However, Czechoslovakia and Poland are reported to compare favorably with Western Europe. Poland and East Germany are dependent upon thermal sources of power, whereas the Danube area has a rather large hydroelectric potential. Plans for the Eastern European countries call for increased power-generating capacity up to a level of 82 billion kilowatt-hours by 1955. If this goal should be attained, the result would compare favorably with output in the United Kingdom and Western Germany with less than half as many people, although it would be considerably less than production in the Soviet Union.

ATOMIC POWER

Probably the most important question in the entire field of power resources is the degree to which the application of atomic power some day may all but eliminate any threat of power shortage. Little more can be done at present, however, than to indulge in guesses as to what lies in the future.

The United States has no control over the knowledge of the atom possessed by Communist countries. The only question about which the United States can do anything in this regard concerns the economic strength of the West *versus* the East. The United States is in a position to be of substantial assistance to Western Europe by providing technical information and necessary materials.

Authorities seem to agree that the development of power from atomic sources in Western Europe is feasible. The huge expenditures that the United States has made in developing atomic energy apparently would not have to be duplicated in order to bring atomic power to Western Europe. On the basis of existing knowledge, it may be possible to introduce a number of nuclear power plants into Western Europe during the next decade which would be a first step toward the eventual slashing of power costs.

Geological evidence indicates that the basic resources (uranium) are more abundant in the free world than in the Communist world.

In the United States in 1953 some 30 billion kilowatt-hours of electric power were utilized by the Atomic Energy Commission, an amount which was equal, roughly, to one-fourth of all the electric power available in the Soviet Union in that year.

Chapter VI. Transportation

Tremendous distances separate resources, manufacturing capacity and consumption centers in the Soviet bloc. In consequence, the transportation requirements of the Soviet Union and the captive countries, relative to national product, are greater than those of other powers. They have been met principally by intensive use of rail capacity. The Soviet bloc does not have the diversity of means of transportation at present possessed by the western countries, and is notably weak in shipping.

Geography and climate are more of a handicap to transportation in the Soviet Union than in the West. The principal exception, namely, the flatness of the Russian terrain, has favored the building of railroads in preference to other means of transportation. In recent years railroads have carried about 85 percent of total ton-mileage of freight. In the United States, by way of contrast, only about 50 percent of total freight ton-mileage is carried by the railroads. These figures do not include private road transportation. If it were to be included, the difference would be even greater.

Although no comprehensive measure of total freight volume is available for Western Europe, it is clear that railroads are still the most important single means of inland transportation. It is probable that the share of total freight carried by the railroads of Western Europe lies somewhere between the figure for the United States and the figure for the Soviet Union, particularly if coastwise shipping and road transport are included in the comparison. Seagoing fleets play a major role among the carriers of Western Europe and they are also important earners of foreign exchange.

In the captive countries of Eastern Europe there is almost complete dependence upon railroads and inland waterways. As in the Soviet Union, road traffic is mostly local. Only Poland has a merchant fleet of any appreciable size.

Distances in the Soviet Union are tremendous. In terms of ton-miles expended per unit of national output, its transportation requirements are greater than those of any other major country. The central allocation of resources in the countries of the Soviet bloc makes it possible, however, for the authorities to penalize "nonproductive" forms of investment whenever some economic sector, such as heavy industry or transportation, is required to effect a rapid increase in capacity.

RAILROADS

The railroad networks of Western Europe have been established for some time and little extension is now taking place. Restoration of war damage has proceeded at a rapid pace and present facilities are virtually the same as before the war. However, there has been considerable improvement in signaling and control equipment and extensive electrification of the main lines, as well as much administrative improvement.

The Soviet Union started with a far smaller total of line which is still undergoing extension. Track density in terms of national territory remains far lower than in either Western Europe or the United States. In terms of track density relative to population, however, the Soviet Union is more nearly on a par with Western Europe, although it is still far behind the United States.

The countries of Eastern Europe had widely different railroad networks before World War II, dense in central Europe and sparse in the Balkans. East Germany had the best-developed system with those of Czechoslovakia, Hungary and Poland following in the order named. Postwar efforts in these countries have been directed toward the restoration of rail networks. Great successes have been claimed. None of the captive countries of Eastern Europe has more than a modest plan for expanding its railroad system, however. The efforts of the less-developed countries of southeastern Europe, notably Bulgaria, appear to be greater than those of other countries in the region, with regard to both the extension of existing rail networks and the acquisition of new equipment.

Western Europe is far better equipped than the Soviet bloc with respect to railroad rolling stock. The countries of independent Europe, had about 72,000 locomotives in use in 1953, compared with 34,000 in the Soviet Union and about 22,000 in the captive countries of Eastern Europe. If the United States is included in the comparison, the Soviet bloc has only about half as many locomotives as the West. The same relationship holds true if Canada is included on one side of the balance and China is included on the other. Furthermore, the locomotives in use in the Soviet bloc are not as efficient as those in use in the West. Not more than 3 percent of all locomotives in use in the Soviet Union are electric or diesel-electric. Also, the Soviet bloc is relatively poor with respect to freight cars. The United Kingdom alone has a million or more (smaller) freight cars, in comparison with about 910,000 in the Soviet Union.

Because of the limited facilities, both of trackage and of rolling stock, there has been considerable crowding of Soviet railroads with large numbers of light, slow trains. As a consequence, locomotives and freight cars are kept on the line more continuously than is the case in the United States. The ton-mile productivity of trains, locomotives, and individual cars is substantially lower in the Soviet bloc than in the West.

Freight traffic on the railroads in Western Europe has increased less rapidly than in the Soviet Union since before the war. Total traffic in Western Europe in 1953 was only about one-quarter that of the Soviet Union. It must be kept in mind, however, that Western Europe is not as dependent upon its railroads as is the Soviet Union.

MOTOR VEHICLES

Western Europe produces over 4 times as many motor vehicles as the Soviet Union and over 3 times as many as the Soviet bloc as a whole. The United States, however, overshadows both regions. In fact, production in the United States in 1953 was well over 15 times the 1955 *Plan* figures of the Soviet Union. In Western Europe, as in the United States, motor vehicles have taken over a

large proportion of the transport load. In the Soviet Union, on the other hand, road traffic is almost entirely confined to short hauls. The tonnage lifted is great but total ton-mileage accounts for only 3 percent of the total for all major carriers. Highway transportation is also of minor importance in the captive countries.

Soviet roads are highly susceptible to seasonal hazards. Prewar estimates put the proportion of hard-surfaced roads at not more than 5 percent of the total. Western Europe has extensive systems of all-weather roads and road densities which, in many countries, exceed that of the United States. There has been considerable expansion in international traffic by road in Western Europe, the rate of increase probably being higher than that of national traffic generally.

MERCHANT SHIPPING

Most of the world's great maritime nations are European. Lack of adequate ports alone would prevent the Soviet Union from occupying a prominent place among the leading shipping nations, even if it did not deliberately choose to play a limited role in international trade.

The maritime countries of Western Europe have done an outstanding job in restoring war losses in their merchant fleets. Over 60 percent of the aggregate shipping tonnage of the 15 countries of the Organization for European Economic Cooperation was destroyed during the war. By July 1952, however, these fleets had been restored to a level 20 percent higher than the prewar figure in terms of gross registered tons. In 1953 the combined merchant fleets of the Soviet Union and the captive countries of Eastern Europe were only 6 percent as large as those of all independent Europe, together, and only 4 percent as large as those of the West, including Canada. Although statistical measures of tonnages actually shipped are not readily available, even the most intensive utilization of shipping facilities could not possibly overcome such disparity in the size of the merchant fleets.

INLAND WATERWAYS

The barge fleets, canals, and locks of Western Europe, which were severely damaged during the war, also have been largely restored. River and canal transportation is important to both Eastern and Western Europe. Where speed is not essential, barges provide cheap transport. In the Soviet Union, even though inland waterways are of secondary importance in comparison with the railroads, travel on them is hampered during a large part of the year because of ice. The volume of freight that can be transported in winter, therefore, is small.

The defection of Yugoslavia in 1948 greatly weakened the grip of the Soviet Union on the important Danube River system.

GENERAL OBSERVATIONS

Transportation in the Soviet bloc is mostly on interior lines and, therefore, in some respects is strategically superior to transportation in Western Europe, which is largely international in character. Economically, the diversity of means of transport in the West is in marked

contrast to the dependence of the Soviet bloc upon its railroads. Diversity adds to complexity and costs when large-scale transshipment is necessary, even though mechanization tends to reduce costs in the West.

Past investment policies favored heavy industry at the expense of the railroads but further economies in railroad operation will be more difficult to achieve, thus indicating transportation will become a retarding factor on Soviet economic growth.

Chapter VII. Foreign Trade

The countries presently comprising the Soviet bloc never have been of major importance in world trade. In 1913 Russian imports and exports accounted for only 4 percent of total world trade and since then have not reached even that proportion. In 1925–37 the share of the Soviet Union in world trade did not exceed 1.5 percent. The other countries included in the Soviet bloc also were of negligible importance in world trade in prewar years.

The countries of Western Europe, on the other hand, have always been important in world trade, accounting for about 46 percent of the total iin 1938.[11]

Prior to World War II Eastern Europe was far more dependent, tradewise, upon Western Europe than Western Europe was dependent upon it. Although over two-thirds of the exports of the countries of the Soviet bloc went to Western Europe in 1938, these shipments accounted for only 9 percent of the imports into Western Europe from all sources. Similarly, although imports from Western Europe into the Soviet Union and the other countries of the Soviet bloc accounted for between 50 and 60 percent of their total imports, the value of the commodities involved accounted for only 6 percent of total exports from Western Europe.

Nevertheless, trade with Eastern Europe was important to certain countries of Western Europe, notably Austria, Germany, Switzerland, Italy, Sweden, and Turkey. Germany alone accounted for about one-third of the total trade of Western Europe with the countries of Eastern Europe in 1938. About 85 percent of this trade, however, was with the Soviet capitive countries, and Finland and Yugoslavia, neither of which belongs to the Soviet bloc. Next to Germany, in terms of volume of trade with the eastern countries, was the United Kingdom.

Although trade between Eastern Europe and Western Europe was small in terms of total value, the commodities imported from Eastern Europe were extremely important to Western Europe. The most significant items were food products, timber, and coal.

Since the close of World War II the Soviet Union has worked consistently to enlarge the power and extent of the Soviet bloc, while disrupting as much as possible economic and political relations in the free world. The captive countries of Eastern Europe have, of necessity, had to follow these policies.

Fear and distrust of the free exchange of goods among nations has induced the Soviet Union to permit as little trade as possible between the Soviet bloc and the West. The Soviet Union has feared economic and political penetration by the capitalist world and a program of self-sufficiency has encouraged intrabloc trade. Between 1938 and 1951 trade between the Soviet Union and other countries of the Soviet bloc increased many times over.

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[11] Excluding the overseas territories of Great Britain, France, and Belgium.

Only recently has the restrictionist trade policy of the Soviet Union been modified.

In contrast to the 20 percent of what is now total intrabloc trade to which the Soviet Union was a party before the war, is the more than 50 percent in which the Soviet Union is involved today.

The following table shows the growth of trade within the Soviet bloc since 1938:

TABLE 10.—*Trade of Eastern Europe with the Communist bloc,*[1] *1938, 1948, 1953*

[In percentages of each country's total external trade]

Country	1938	1948	1953
Czechoslovakia	17	32	78
Poland	7	41	70
Rumania	17	71	84
Hungary	15	34	77
Bulgaria	15	78	86
U. S. S. R.	9	42	80
Albania	[2] 5	38	100
East Germany	[2] 12	41	80

[1] Trade with other Eastern European countries, with the Soviet Union and with China.
[2] 1937 data.
[3] See table 64 (p. 184) for greater detail.

Meanwhile, trade of Eastern Europe with Western Europe and other countries of the free world declined about 65 percent between 1938 and 1953.

Certain Western European countries, however, are now exporting considerably more to Eastern Europe than they did before the war. For example, exports from Denmark and Norway to the Soviet bloc increased from 16.5 million dollars in 1938 to 75.9 million dollars in 1953. Dairy products, fish, whaling products, and transportation equipment have been the principal exports. Finland's exports to the Soviet bloc also have increased considerably. In 1938 only three percent of her total exports went to other Eastern European countries; in 1953 she sent 31 percent to that area. Her imports from Eastern European countries, similarly, increased from 9 percent of her total imports in 1938 to 34 percent in 1953. Danish and Norwegian imports from Eastern Europe declined 30 percent in the same period.

SOVIET FOREIGN ECONOMIC POLICY

Soviet foreign economic policy has no formal plan in the sense of the Marshall plan. There is, it is true, what is often called the "Molotov" plan, which is merely a threefold attempt to unify further the Soviet orbit. The Soviet Union has begun, in some respects in a halting manner, a threefold policy which is attempting to standardize the development plans of the countries of the orbit, to coordinate the trade of the area so that as little reliance is placed upon the free world as possible, and to provide for central, i. e., Soviet, decisions on all economic and political matters.

Another aspect of Soviet postwar economic policy has been the granting of loans to Albania, Poland, Czechoslovakia, Bulgaria, Rumania, and East Germany. These loans seem to have been dictated by the disruption of the trade patterns of the captive countries occa-

sioned by Soviet policy. Such loans have made it possible for the captive countries to import from the Soviet Union the capital goods and the raw materials needed for their industrialization programs. The ultimate purpose has been to strengthen the position of the Soviet Union as leader of the Soviet bloc.

Joint, or mixed, companies were one means whereby the Soviet Union dominated the economies of the captive countries. Supposedly, these companies are run on a 50–50 basis, with each partner making equal contribution and having an equal share in management and in profits. In reality, however, the contributions of the Soviet Union consisted largely of reparations and of captured German assets. Each concern was dominated by a general manager who is a Soviet citizen and who has control of the day-to-day operations of the company. Such organizations were established in Bulgaria, Hungary, and Rumania. In the last few years, however, most of them have been dissolved.

State trading agencies have been established in the Soviet Union and in the captive countries. Among their functions is the enforcement of compliance with foreign trade policy.

Since 1951 there has been some lessening of restrictions against trade with Western Europe. However, the captive countries had little success in their efforts to encourage the countries of Western Europe to trade with them until, in 1953, they began accepting consumer goods in trade. Since then a number of trade agreements have been consummated.[12]

Increasing payments difficulties on the part of the countries of the Soviet bloc indicate that there is a limit to the amount of trade which they can carry on, unless and until some means of financing that trade are evolved. In 1953 the Soviet Union resumed shipping gold to Western Europe in payment for goods, a policy it had followed in the twenties and thirties. Such financing obviously has limitations although the Soviet gold reserve is large and production is high.

RETARDING FACTORS IN EAST-WEST TRADE

Following the close of World War II the countries of Eastern Europe were unable to trade with the West because of the destruction of the transportation systems connecting them with Western Europe. Furthermore, currency systems were chaotic, agricultural production had shrunk, and many industries were barely functioning. Furthermore, the necessity of paying reparations forced them to send their most valuable trading items to the Soviet Union.

Industrialization programs of the captive countries have created local markets for products which formerly were shipped to Western Europe. Furthermore, many merchants in the West have found that when they deal with the state trading monopolies of the Soviet bloc they have to endure exasperating problems of pricing, delivery dates, grading, inspection, and other obstacles.

Strategic controls established by the United States and the countries of Western Europe also have served to deter East-West trade. It has been the strategic items, of course, that the Soviet Union and the captive countries have been most eager to receive in trade. So long as the cold war continues these controls can be expected to deter trade.

[12] See Appendix Table XIII.

On the basis of political considerations alone many European countries have hesitated to resume full-scale trading relations with the countries of the Soviet bloc. They fear Soviet trading tactics, including "dumping." The power that the countries of the Soviet bloc have to shift orders about from country to country without advance notice and in such ways as to create crisis, unemployment, and political difficulties is a major deterrent to trade with the West.

PROBABLE TREND OF EAST-WEST TRADE

Barring the outbreak of war, East-West trade probably will increase in the coming decade. Some estimates place the possible growth at as much as $300 million per annum, although this figure seems somewhat excessive. There seems to be little prospect of large increases in exports from Eastern Europe to Western Europe, except possibly Soviet wheat, Soviet and Rumanian petroleum, Polish coal and timber. Outside of strategic trade controls, the greatest deterrent to East-West trade is the lack of means of payment on the part of the Soviet bloc countries. Up to a point, however, Soviet gold, manganese, furs, and possibly certain minerals from the captive countries, might be used to pay for imports of capital equipment, consumer goods, and raw materials. There will inevitably be some increase in East-West trade, but present prospects are that the increase will be of moderate proportions.

PART TWO: OVER-ALL TRENDS; THE NATIONAL ACCOUNTS

Chapter VIII. The Nature of National Accounts

Estimates, in monetary terms, of the volume of receipts and expenditures in the entire economy of a nation, or in a major subdivision of that economy, e. g., government, are termed "national accounts." The purposes of national accounts are, in general, twofold: (*a*) To measure differences in economic activity through time or between countries, and (*b*) to measure interrelationships between *industries* (agriculture, manufacturing, services, etc.), between *institutions* (households, corporations, governments, etc.), between *socioeconomic classifications* (wage earners, salary earners, *rentiers*, etc.), and between *uses* (investment and consumption). The former function of national accounting is historically the older; it arose from the attempts of the 19th century British economists, especially Ricardo, to measure economic progress. The later function arose from the numerous inquiries of British and American economists (especially J. M. Keynes, Colin Clark, and Simon Kuznets) into the relationships between the dynamics of economics and social welfare. The significance of this function of national accounting has increased immensely over the past 20 years, for the models of socioeconomic interrelationships so developed have proved very useful. They have led to vastly improved understanding of the roles of bottlenecks or of stimuli within economies, and thus to more realistic assessments of the economic capacities of nations, and of methods for maximizing them both in peace and in war.

To clarify further the nature of national accounts, it appears worthwhile to indicate their theoretical scope. They deal only with goods and services which are not free, like air and sunshine, but must be generated through the expenditures of labor, the use of land or equipment, special skills, or any combination of these factors of production.

These goods and services must also be customarily exchanged for other goods and services, regardless of the partner in the exchange and usually through the medium of money. Furthermore, national accounts value goods and services neither in physical units nor in their subjective utility but solely in terms of what they will bring in terms of money. Thus, a workman who doubles his earnings doubles his productivity in terms of national accounting whether he produces 10 times, or a tenth, as many goods in physical terms as before.

Finally, national accounts are, above all, measures of economic *activity* without immediate reference to efficiency or degree of utilization of national wealth. National income, as defined by the United States Department of Commerce, measures the total factor costs of the goods and services produced by the economy. To measure efficiency, supplementary information is needed, e. g., the input of labor or capital per dollar of income generated.[1] In the same way, econo-

[1] The systematic study of the efficiency of various productive operations, so-called input-output analysis, has been considerably developed in the past 15 years, especially by W. Leontieff, of Harvard University, and his collaborators.

mies may operate at different levels of capacity, utilizing not only equipment but labor at quite different intensities. This is markedly true when the countries of the West are compared with those of the Soviet bloc. If, in the former, the national income generated under normal peacetime conditions is, say, a fifth of the national wealth, then in the latter it is more likely to be a third.

It is also important to point out that many basic concepts in national-accounts theory are still imperfectly developed. Often, past ideas have not been rigorously reassessed in terms of the present. A notable illustration is the concept "investment". Essentially, "investment" still means accretions to capital through construction, the installation of equipment, and additions to stocks. Thus it bears on only one, and not necessarily the most important, facet of the activities basic to economic progress. An adverse result of this limited concept has been the neglect of data gathering and analysis in health and educational, including even research and development, expenditures.

At the same time, economists, desiring to achieve comparability or completeness in their measurements have, on occasion, to go beyond rigorous measurements. An important illustration is the whole problem of "imputation," i. e., ascribing market values to goods and services consumed by the producer or exchanged outside the market system. Since farmers tend to consume a far greater proportion of their own product than do urban dwellers, the monetary flows and, hence, the national incomes in 2 economies, 1 of which is more rural than the other, are markedly different, given identical standards of living in physical terms (food, shelter, clothing, etc.). Faced with this situation, economists have had to choose between methodological rigor, and with it, an absurd picture of per capita incomes of $50 per year in most of the world, and imputation.

The latter course, however, is also hazardous, for what to impute and what to exclude, and how to price imputed goods and services are difficult questions. The choices made are often conventional. In the United States, for example, the imputed rentals of owner-occupied houses are included in the national income, but the value of the transport services performed by owner-driven cars is excluded. With regard to pricing, also, the problems are difficult. Is the large proportion of agricultural output consumed by Soviet peasant households to be priced at the levels, little short of confiscation, set by the state in the compulsory procurement of grain and livestock? Or is the use of retail prices paid by urban dwellers preferable? In the latter case, should the prices be those of the state stores (with or without the enormous turnover taxes) or those of the free or even the black market? Obviously, no uniquely correct answer to these questions exists. In consequence, significantly different values may be ascribed by different economists to peasant household consumption in the Soviet Union.

Many other pitfalls and unresolved problems may be found in the study of national accounts. Two are particularly important with respect to long-term and international comparisons.

1. The types of national accounts kept by different countries or by the same country at various times often differ greatly in scope and method. In the present report, the definitions and procedures adop-

ted by the Organization for European Economic Cooperation [2] have been followed as closely as possible.

2. Differences between the price systems of various countries and within countries over a period of time introduce serious difficulties in the comparison of national accounts. Economic growth is rarely effected throughout all parts of an economy at the same rate. In general, manufacturing has tended to receive more investment than other branches. Hence, in most countries and over the long run, manufacturing costs have been declining relative to agricultural costs and manufactured goods have been becoming more abundant and cheaper. This can be illustrated by comparing American prices in 1879 and in 1929. Over this period, the prices of metals and metal products dropped 57 percent in relation to the prices of farm products; those of chemicals and drugs, by 52 percent; of textile products, 31 percent; of house furnishings, 19 percent; and of food, 16 percent. On the other hand, fuel and lighting dropped by only 3 percent, while building materials actually rose 15 percent.[3] (These exceptions reflect the increasing scarcity of lumber, once virtually a free good in the United States.)

Because of these differential price trends, the structure and the rate of growth of an economy, as measured by the price relationships characteristic of an early stage of industrialization, appear radically different from those measured by the price relationships of the same economy at a later stage, or by those of another, more industrialized economy. In general, the pattern of differences caused by this factor alone are as follows:

Factor	Measure	
	Early or less industrialized	Later or more industrialized
1. Size of national product in relation to that of more industrialized economies.	Lower	Higher.
2. Rate of growth	Higher	Lower.
3. Share of manufacturing in national income	do	Do.
4. Share of investment in total expenditure of gross national product	do	Do.

The calculations made for the Soviet economy in 1928 and 1937 by Jasny, Grossman, and Clark in three price systems reflecting conditions of increasing industrialization (table 11) illustrate this point. Gilbert and Kravis' extremely careful comparison of the gross national products of the United Kingdom, France, West Germany, Italy, and United States, measured both by the prices of each country and by American prices (table 12) provides further illustration. *Special attention should be given to the very large magnitudes of difference resulting from the different methods of measurement.* For example, the Soviet rate of growth in the 1928–37 period is 2.8 times as high in 1926–27 ruble values as in United States 1925–34 prices (international units). Again, the Italian gross national product in 1950 was 9.3 percent of the American, when both were measured in United States prices, but only 5.4 percent of the American when both were measured in Italian prices. This is a change in relative size of 42 percent.

[2] A Standardized System of National Accounts, OEEC, Paris, 1952.
[3] U. S. Department of Commerce, Bureau of the Census: Historical Statistics of the United States, 1789–1945 (Washington, Government Printing Office, 1949), p. 231.

TABLE 11.—*Dependence of calculations of Soviet national accounts on the price system used*

Items	Unit of measurement					
	1926/27 Soviet prices [1]		1937 Soviet factor costs [1]		1925–34 United States prices [2]	
	1928	1937	1928	1937	1928	1937
I. Soviet net national product as percent of United States, same year	[3] 15	[3] 25			30	[3] 37
II. Index of growth 1928–1937/38	100	198	100	157	100	135
III. End-uses of the product (percent of total):						
Consumption	82.8	60.1	92.6	79.4	96.0	86.7
Military	2.5	10.3	1.9	10.3	3.6	14.3
Health and education	5.0	7.6	6.7	10.7	4.0	8.7
Private and other	75.3	42.2	84.0	58.4	88.4	63.7
Net investment	17.3	39.9	7.4	20.6	4.0	13.3

[1] Jasny, N. and Grossman G., in A. Bergson (ed.): Soviet Economic Growth (Row, Peterson & Co., Evanston, Ill., 1953). p. 7. Based on Jasny's estimate in "true" 1927/27 rubles.
[2] Colin Clark, in a manuscript chapter, The Valuation of Real National Income in Soviet Russia, for the forthcoming 3d edition of Conditions of Economic Progress. By courtesy of the author.
[3] From computations by Herbert Block, U. S. Department of State.

TABLE 12.—*The structure of gross national products in United States and national prices, 1950*

Factor	United Kingdom		France		West Germany		Italy		United States (a)
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	
Gross national product:									
Total, percent of United States	20.9	16.4	14.9	11.0	13.6	9.5	9.3	5.4	100.0
Per capita, percent of United States	63.0	49.0	53.0	39.0	43.0	30.0	30.0	18.0	100.0
Gross national product by end-use, percentages spent for:									
I. Private consumption	66.3	68.1	61.4	63.2	59.1	63.4	65.0	69.2	63.1
1. Food, alcoholic beverages and tobacco	26.8	28.2	34.1	31.4	29.9	30.8	39.1	41.9	19.9
2. Clothing and household textiles	6.4	9.2	5.4	8.7	5.6	10.0	6.0	11.9	7.7
3. Housing, fuel, light and water	10.0	8.0	6.3	5.2	6.8	6.7	5.3	4.1	8.1
4. Consumers' durables	4.0	7.1	3.0	7.0	3.3	5.8	.7	2.2	10.4
5. Services (except health and education)	18.9	15.6	12.7	10.9	13.5	10.2	14.2	9.1	17.0
II. Health	4.3	4.3	4.1	3.4	5.1	3.1	1.3	1.3	4.0
III. Education	2.4	2.4	3.0	1.7	2.3	2.4	4.6	2.5	2.4
IV. Investment	10.7	12.5	16.4	19.6	20.1	21.9	13.8	19.3	21.2
1. Producers' goods and construction	7.8	11.2	11.4	14.2	9.8	14.8	9.3	15.6	14.0
2. Housing	4.1	2.6	2.8	2.8	8.5	4.7	3.3	2.2	5.0
3. Inventories	−1.1	−1.3	2.4	2.7	1.9	2.4	1.1	1.3	2.2
V. Government (except health and education)	15.0	10.9	14.8	11.6	14.3	10.9	15.1	7.8	8.8
1. Defense	7.7	7.0	8.2	6.2	5.6	4.6	5.7	4.1	5.3
VI. Net exports	1.1	1.9	.3	.6	−.9	−1.6	.1	.1	.5
All commodity factors [1]	59.2	66.9	65.4	72.5	64.8	73.5	64.7	79.5	67.8
All service factors [2]	40.6	33.2	34.6	27.6	35.2	26.6	35.2	20.7	32.2

[1] I 1–4, IV, VI.
[2] I 5, II, III, V.

NOTE.—(a), GNP measured in United States prices; (b), GNP measured in national prices; (b)/(a) ratios: United Kingdom, 0.783; France, 0.737; West Germany, 0.699; Italy, 0.584.

Source: Gilbert and Kravis (1954).

The changes incident to increasing industrialization are not the only ones which exercise an important influence upon national price structures. Governmental and private bodies often exercise vested rights in order to gain special advantages. In the Soviet Union, for example, the state has, over the past 20 years, been able to guarantee the delivery of agricultural products by the peasantry at prices which in no way reflect relative scarcities. In the United States there have been vast social changes since 1929, including the large-scale organization of labor, the introduction of wage-floors, social security, and agricultural price parity. As a result of these social changes, the relative price movements that one would expect from intensified industrialization have been greatly modified, and even reversed. For example, prices of durable goods have risen faster than prices of private services (table 13).

Given such pervasive effects from differences in industrialization and institutions, can any comparison be made of national accounts except after recomputation to a unitary price system? The answer is affirmative in one meaningful way. We can see the *effort* exercised by a particular country in pursuit of its goals, *relative to its own resources and its own institutions.* In other words, the laying aside of 20 percent of the gross national product in Italy, in Italian measurements, means a saving (a sacrifice of consumption) at least as severe for the Italians as the same proportion of the United States gross national product in American terms would be for this country. In fact, considering the smaller margin available in Italy above minimum consumption needs, the hardships entailed by an equivalent saving rate would be far more severe. This, in itself, is an important fact, whether or not the input in question can be determined in uniform physical terms.

TABLE 13.—*Price movements in the United States, 1929–52* [1]

Item	Year					
	1929	1933	1939	1944	1948	1952
Gross national product	100	75.0	82.7	112.7	149.4	167.4
Personal consumption expenditures	100	71.6	79.1	108.7	140.2	154.8
Durable goods	100	78.5	85.8	131.7	156.3	177.2
Nondurable goods	100	68.8	77.1	116.2	156.4	168.1
Services	100	73.0	79.4	92.7	113.1	131.1
Gross private domestic investment	100	76.2	94.3	110.4	177.7	203.7
New construction	100	72.7	94.2	133.5	209.2	245.3
Producers' durables	100	84.7	94.4	105.2	148.9	175.9
Government purchases	100	85.5	93.0	125.9	177.7	207.3
Federal	100	87.6	99.4	135.2	191.1	219.3
State and local	100	85.7	91.9	115.7	173.8	209.0

[1] Derived from Office of Business Economics: *National Income. A Supplement to the Survey of Current Business* (Washington, 1954, p. 216.)

The results of the present study must be viewed in such relative terms and in them alone. The job of recomputing all European national accounts in a uniform price system has not been done for the period 1938–52/53.

The careful execution of that task would be a matter of great importance, for it alone would permit absolute determinations of the sizes, growth rates, and structures of the European economies.

The availability of such knowledge would, in turn, make possible greatly improved economic assessments and plans. At the same time, it should be noted that the base used for such a uniform system would greatly influence the results. The use of a contemporary Soviet, rather than an American price system, would greatly widen the margin of western strength, at the same time accelerating the apparent progress of the less industrialized nations.

Finally, emphasis must be placed upon the varying, often poor and generally incomplete, information upon which national accounts analyses are based. The reliability of United States national income and product estimates has been assessed carefully by the Department of Commerce.[4] This organization has concluded that no numerical measures of reliability for the aggregate product or its components are feasible. In its opinion, however, data on wages and salaries are the most reliable, with estimates of the rental income of persons being the least reliable. The "income of unincorporated enterprises" and the "inventory valuation adjustment" (a correction for the difference between book and replacement values) are also somewhat shaky.

In Europe, few countries made systematic national income or other accounts estimates prior to World War II, and data on specific problems, such as the allocation of investments by industry, were gathered even more rarely. Thus the materials on the years 1936–38 presented here are largely from ex post facto calculations, with large errors quite likely. For the postwar period, the most careful attempts to compile national accounts on a conceptually and methodologically homogeneous basis, though in the price systems of each nation, have been made by the Organization for European Economic Cooperation.[5]

The unearthing of disguised governmental expenditures, through transfers, loans and guaranties, is difficult in every country. Beyond this, estimates for the countries of the Soviet bloc can use official data only after painstaking verification of their precise meaning, and of their structural, historical and comparative consistency. For the rest, independent calculations have to be made, often on rather flimsy evidence. About all that can be claimed for the national accounts statistics presented is that they represent appropriate patterns and orders of magnitude.

To summarize.—National accounts are the tools by which economists have sought to describe the levels and patterns of activity for economies in their entirety. They have proved useful as guides to practical economic policy over the past 20 years. But they are still imperfect, conceptually, technically, and factually. The results gained from their use depend largely upon the specific price system used. Indeed, interpretation of national accounts data is still more of an art than a science.

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[4] Bureau of Foreign and Domestic Commerce: National Income. A Supplement to the Survey of Current Business. (Washington, D. C. (1954, pp. 62–64).

[5] OEEC: Statistics of National Product and Expenditure, 1938, 1947 to 1952, 310 p. (Paris, 1954).

Chapter IX. Aggregate Comparison of the National Products of the West and of the Soviet Bloc

In order to establish a basis for comparison, even in the relative terms set forth above, some estimate of the approximate sizes of the gross national products of the European countries, the United States and Canada is necessary.

Table 14 presents such an estimate in terms of the domestic purchasing power of United States 1952–53 prices, a measure which, as has been noted, *minimizes* the differences in total product between countries of varying stages of industrialization. Thus, in comparison with the direct use of foreign-exchange rates (as by the Foreign Operations Administration) this measure gives over 60 percent higher estimates for independent Europe in relation to the United States.[6] Even by this measure, the United States and Canada alone may be credited with a product about 2.5 times as great as that of the Soviet Union and captive Europe combined. The product of the United States and Canada, however, exceeds that of the countries in the proposed Western European Union by a much smaller margin, some 60 percent. In general, independent Europe is the second greatest aggregate of *economic* power in the world.

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[6] The adjustments for the domestic purchasing power of foreign currencies made here are based on the pioneering study for 1950 by Gilbert and Kravis (1954), the results of which have not yet been incorporated in official estimates. Although the data are extraordinarily informative, this work must be regarded as preliminary, being restricted to a single year and only four European countries. Mr. Fred Sanderson, of the United States Department of State has pointed out evidence indicating that the differentials between foreign and domestic purchasing power determined by Gilbert and Kravis had diminished, between 1950 and the fiscal year 1952–53, about 10 percent in a number of countries. Thus the figures presented for independent Europe are probably somewhat high. However, in the absence of firm materials for 1952–53 the data have not been corrected for this additional factor.

TABLE 14.—*Orders of magnitude of total and per capita national products, 1952–53*

Areas	Domestic purchasing power of United States 1952–53 dollars	
	Gross national product	Product per capita
1. United Kingdom, France, Western Germany, Italy, Benelux	240	1,150
2. Other Free Europe (including Turkey)	65	550
3. United States and Canada	385	2,225
Total and average	690	1,380
4. Soviet Union	110	535
5. Poland, East Germany, Czechoslovakia	35	615
6. Hungary, Rumania, Bulgaria, Albania	10	285
Total and average	155	515

Sources: (1) For Western Europe: FOA estimates adjusted on exchange-rate bases, readjusted by coefficients between exchange-rates and domestic purchasing power in United States, United Kingdom, etc. (cf. Gilbert and Kravis, 1954, pp. 22–23). Readjustment coefficient for other countries: Other Free Europe, 1.66; Canada, 1.00. Sweden, Finland, Switzerland, and Ireland estimated to have equal per capita products (as an aggregate) to the average of United Kingdom, France, West Germany and Italy.

(2) For the Soviet Union, 1951 estimate of gross national product from C. Clark (mss.) in international units (United States 1925–34 dollars) converted to United States 1953 dollars by multiplying by 1.75. 10 percent added for growth to mid-1952. Various alternative methods give closely comparable results.

(3) For Poland and Czechoslovakia, Colin Clark's estimates for 1938 and 1937 (Clark, 1951, pp. 114–115, 158–159) in international units were expanded to gross national product by adding 4 percent depreciation, and then converted to 1953 values by multiplying by 1.75. The data were brought up to date very approximately by multiplying by the coefficient of growth (1937–38–1953) in final national currencies of 1938 and 1948, respectively. The basic calculations were prepared with the cooperation of the United States Department of State. For East Germany, the 1953 gross national product in 1936 Reichmarks has been calculated by the Department of State. The conversion coefficient of $0.756 (1953) per 1936 RM was calculated from linking Gilbert and Kravis' data (op. cit.) with German price information in Statistisches Bundesamt 1954, pp. 522–523).

(4) The data for Hungary, Rumania, Bulgaria, and Albania are very approximate, based on slim indications of per capita products about those of Greece, Turkey and Yugoslavia.

On a per capita basis, the differences in national output are also large, reaching a maximum of about 8 to 1 when the United States and Canada are contrasted with the countries of the Danubian Basin and the Balkans. In the Soviet Union itself, output per capita is about a quarter the American, half that of the countries of Western Europe, and probably below that of Poland, East Germany, and Czechoslovakia. This unfavorable showing derives, in large measure, from the very low productivity of the peasant majority of the Soviet population.

Chapter X. Economic Trends in Western Europe, the United States, and Canada

1. For all Western European countries the median rise in gross national product (at constant national prices) for the period 1938–53 was 40 percent. In 10 countries, including the United Kingdom, France, and the Netherlands, the levels reached ranged from 26 to 45 percent above prewar. In only 3 countries (Ireland, Italy, and Greece) were they only 10 to 20 percent higher than prewar, while in 3 other countries (Norway, Sweden, and West Germany) they reached levels 52 to 58 percent higher than those of 1936–38. Turkey's national product was 70 percent higher in 1953 than in 1938. Those of the United States and Canada, respectively, were 119 and 127 percent higher (appendix table I).

2. According to the calculations of Colin Clark (made in constant United States 1925–34 dollars), the median rise in national products for 11 Western European countries between 1925 and 1938 was about 35 percent, or the same annual rate of increase as between 1938 and 1953. Better economic management and mutual aid since World War II have fully offset the effects of the war on the economic growth of Western Europe. Furthermore, the post-World War II record shows no cases of economic regression. In the period 1925–38, by way of contrast, the French national product declined by 13 percent and the Yugoslav by 2 percent. Finally, the dynamism of the United States and Canadian economies since 1938 had no counterpart in the interwar period. In 1938, the United States national product was only 18 percent higher than in 1925, while the Canadian was 33 percent higher than in the earlier year (appendix table II).

3. In eight Western European countries,[7] and in the United States and Canada, the relative importance of various industries in the origination of the national income changed considerably in the 1938–52 period. The median share of manufacturing and mining rose in all these countries (except Denmark) from 25.5 to 33 percent. The share of construction increased in every country, from a median of 4.0 percent to one of 5.9 percent. The median share of agriculture, forestry, and fisheries has remained constant, at little more than 14 percent. In individual countries, however, both moderate to sharp increases (Canada, United Kingdom, and Netherlands) and moderate to sharp decreases (West Germany, Italy, Finland, and the United States) have taken place. The share of services (excluding utilities and transportation, for which the evidence is uncertain) has fallen in all the Western countries, except Greece, from a median of 37 to 33 percent. Finally, net income from abroad, once a considerable factor in a number of European economies, has diminished or disappeared other than as American governmental aid.

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[7] Norway, Finland, Denmark, Western Germany, Netherlands, United Kingdom, Italy, and Greece.

Thus, the most dynamic sectors of the Western economies over the period 1938–52 have been manufacturing, mining, and construction. Income from agriculture has developed at the same rate as the entire economy, while the expansion of services has lagged (appendix table III).

4. Changes in the relative importance of the various industries have been associated with differentials in the growth of productivity (measured in terms of income in constant prices per employed person rather than in physical terms such as tons of coal). In general, e. g., in Scandinavia, Germany, Netherlands, Italy, and the United States, manufacturing, mining, and utilities have become the sectors of highest per capita earnings in the postwar period. In Ireland, transportation and trade is the sector so distinguished; in the United Kingdom, agriculture. With one exception, already noted, agriculture is the least productive sector in all Western European countries and the United States. These relationships contrast markedly with those of the pre-World War II period, when services, especially transportation and commerce, were the most lucrative industries, while manufacturing was low, or even lowest, in returns.

5. Important changes have taken place in the pattern of expenditure of the gross national products of the Western European countries, the United States and Canada:

(*a*) In Scandinavia, Germany, the Netherlands, the United Kingdom, Austria, the United States, and Canada the share of the national product allocated to private consumption has dropped, from a median of 73 percent in 1936–38 to a median of 63 percent in 1952–53. The United States, the Netherlands, the United Kingdom, and Austria have been marked by the greatest reductions in the share of consumption. However, the lowest share devoted to private consumption in any country outside the Iron Curtain is 49.8 percent, in Yugoslavia, which is generally characterized by a Soviet-type expenditure pattern. Turkey, Greece, Italy, Portugal, Ireland, and probably Belgium have been distinguished by increases in the shares of national product devoted to private consumption, from a median of 73 percent to one of 77 percent. In Spain and Portugal, too, the shares consumed are high, 72.5 percent and 80 percent, respectively.

(*b*) In seven Western European countries (Scandinavian nations, Netherlands, United Kingdom, and France), and in the United States and Canada, the share of the national products consumed by the government has risen greatly since 1938. The main force in this extraordinary growth of government demands for current purposes has been defense.

At the same time, government consumption as a share of the national product has declined in at least five countries: West Germany, Italy, Greece, Turkey, and Austria. In 1936–38 the proportion allotted to the government by those countries ranged from 23.6 percent in Turkey to 15.9 percent in Greece. By 1952–53, the maximum in this group of countries had fallen to 18.1 percent, in West Germany; the minimum, to 9.4 percent in Greece. Spain and Portugal, too, are distinguished by low shares of government consumption.

(*c*) The share of gross investment (adjusted for foreign-trade balances) has increased markedly in Western Europe, the United States,

and Canada since 1938, from a median of 14 percent to 18 percent.[8] Nevertheless, a wide variation in investment rates has persisted. In 1938, the lowest investment rate was in Greece; rates below 10 percent also characterized France, Ireland, Portugal, and Austria. In 6 countries, including the United States and the United Kingdom, it ranged from 10 to 17 percent, while in Germany, Italy, Finland, Sweden, and Norway between 18 and 23 percent of the gross national products were being invested. In 1952–53 Denmark, Netherlands, Austria, and Yugoslavia had been added to the original group of countries with investment rates of 18 percent or higher. In the middle group investing 12 to 17 percent of the gross national product were Turkey, France, United Kingdom, Belgium, Ireland, Spain, and the United States. Rates of 10 to 18 percent characterized Portugal and Greece (appendix table VI above).

6. The estimation of trends in per capita private cansumption is complicated, since the calculations must be based on the relations between a number of estimated variables (gross national product in fixed prices, the share thereof taken by private consumption, and the population). Hence, the probability of error is so considerable that only orders of magnitude can be discerned with any confidence.[9] In Western Europe, the United States, and Canada the rates of increase in per capita consumption between 1936–38 and 1952–53 have varied considerably. Five groups may be isolated (tables I, VI, and VII):

(a) Nations with very rapid increases in the standard of living (45–50 percent higher per capita consumption in 1953 than in 1938): the United States and Canada.

(b) Nations with rapid increases in per capita consumption (25–35 percent gains): Norway, Belgium, Portugal, and Turkey.

(c) Nations with moderate increases (11–20 percent gains): Denmark, Sweden, West Germany (since 1936), France, and Ireland.

(d) Nations exhibiting very slight increases in the standard of living (4 to 8 percent gains, 1938 to 1952–53): United Kingdom, Italy, Austria, and Finland.

(e) Finally, in three nations, slight to appreciable declines in the standard of living (averaging possibly 5 percent) have taken place since 1938: the Netherlands, Greece, and Yugoslavia. All were countries which suffered heavy war damage. The Netherlands, in addition, lost its income from the East Indies. Also, its population grew 19 percent compared to a median of 12 percent for the 16 European nations considered. Finally, Dutch investments had to be expanded greatly to achieve even a moderate economic revival, while defense expenditures have about quadrupled since 1938.

In the case of Greece, the dominant factor has been the prolongation of hostilities through 1948. In Yugoslavia, the adoption of the Soviet-type structure, with a monstrously large government and military establishment, and with a heavy investment effort, unquestionably lowered living standards.

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[8] In general, investment rates have increased over 50 percent in Austria, France, Portugal, and the Netherlands; also risen substantially in West Germany, United Kingdom, United States, and Finland; and declined measurably only in Belgium and Greece.

[9] For the population figures see U. N. Demographic Yearbook, 1953, pp. 69–81 and appendix tables XIV–XVI.

7. Only partial data are available showing the patterns of consumer expenditure in Western Europe, the United States, and Canada. In general, the proportion of total expenditure devoted to *food* has been *inversely* related to high and growing standards of living. Greece had the highest in 1953 (60.6 percent), a share comparable with that expended in the Soviet-bloc countries. Italy is next (47.4 percent) and is followed by Belgium, Austria, France, and the Netherlands (44.8–39.1 percent). Norway, West Germany, United Kingdom, Sweden, and Ireland comprised the European group devoting the lowest shares to food (33.3–30.5 percent). The United States spent 27.1 percent and Canada 24.6 percent.

Rents.—Primarily because of controls and subsidies, the share of expenditure devoted to rents fell markedly between 1938 and 1953. In Norway, Sweden, the Netherlands, United Kingdom, United States, and Canada, the median share devoted to rents declined from 15.2 percent, prewar, to 7.9 percent in 1953. In a few countries, where rents reached a very low level in 1949 (e. g., 1.6 percent in France) there has been a slight upward movement in the last few years. Today only in Belgium is there heavy expenditure on rent (18 percent).

Other components of consumer expenditures show far greater irregularity. The propensity to consume *alcohol, tobacco, and other nondurables other than clothing* correlates rather highly with high and rising standards of living. The United States and Italy are, however, marked exceptions, with the Italians spending a far larger share of private income on these luxuries than Americans. Differences in national patterns are also evident in the demand for *clothing*, which is extremely high in Norway, Sweden, and the Netherlands. In the last-named country, the share devoted to clothing increased from 9.5 per cent in 1938 to 15.9 percent in 1953, notwithstanding a considerable decline in the general standard of living. In contrast, the shares devoted to clothing in the United States and the United Kingdom have been the lowest of all. The demand for *durable goods* is low in Greece and Italy (1.8 percent and 3.1 percent of consumer expenditures, respectively), but otherwise quite irregular in relation to both the level and the trend of living standards. It has risen markedly in the United Kingdom, Canada, and the United States, but it has fallen in Norway and Austria. Finally, the demand for private services correlates rather well with standards of living, ranging in 1953 from 7.3 percent in Greece to 29.2 percent in the United States.

To sum up.—Incomplete data seem to indicate that, except for the inelasticity of demand for food, no international generalization can be safely made in correlating specific patterns of demand with rising or falling standards of living (Appendix table VII). At most, some stability in preferences may exist within the same country.

8. The concept of Government expenditures is more comprehensive than that of Government consumption of goods and services for current civil and military functions. It also includes transfer payments (social security, veterans' gratuities, interest on the public debt, etc.), subsidies for consumers' goods, Government gross investment, and loans and capital transfers to other sectors. The last component is often hidden in extraordinary "capital" budgets, the accounts of Government corporations, or other odd corners which make possible

disguised deficit financing. Ascertainment of its existence and measurement of its size has been possible only in a few cases.

In general, even "regular" expenditures have been taking sharply increasing shares of the gross national product in Norway, Sweden, Denmark, Netherlands, United Kingdom, France, the United States, and Canada. For these nations, the median was 22.9 percent in 1938 (with a minimum of 16.5 percent in Sweden, and a maximum of 27.2 percent in the United Kingdom) and 27.3 percent in 1953 (with a minimum of 22.3 percent in Denmark, and a maximum of 35.7 percent in United Kingdom and France). Beyond this, known governmental loans and transfers in 1953 took an additional 1 percent of the gross national product in the United States, and between 4 and 5.1 percent in Norway, United Kingdom, France, and the Netherlands.

The pattern of "regular" governmental expenditures in the countries just named has changed considerably since 1938, though far less so in Europe than in the United States. In the latter, expenditures for defense increased from 6.6 percent to 47.5 percent of the total, while those for current civil functions declined from 50 to 27 percent; for investment, from 18.4 percent (once the maximum) to 8.3 percent; and for transfer payments and subsidies, from 25 percent to 17.2 percent. For Norway, Denmark, Netherlands, United Kingdom, France, Sweden, and Canada, the median share of governmental expenditures devoted to defense has risen from 9.5 to 19.5 percent. Transfer payments and subsidies are also claiming a larger portion, a median of 35.8 percent against 34.3 percent in 1938. The drop in investment in "regular" budget, from a median of 11.1 percent to 10.4 percent, has been more than counterbalanced by the rise of extra-budget loans and transfers. Finally, expenditures for current civil functions alone have fallen markedly from a median of 49.7 percent to 35.4 percent. The patterns of expenditures of other European countries, such as West Germany, Italy, Greece, etc., are fairly similar, although defense expenditures (or equivalent occupation costs) are somewhat lower.

While in many European countries the share of defense expenditures has risen markedly since 1938, both in relation to gross national product and to total governmental spending, the changes in pattern appear to have been less drastic in the United States. Current civil functions, investment and, especially, transfer payments and subsidies are not nearly so outweighed by defense as in this country (appendix table VIIIa).

9. Deficit-financing has been characteristic of most western governments both before and since World War II. Of the countries for which reasonably reliable data are available, Norway alone has consistently maintained a truly balanced budget. She has been joined since World War II by Austria, and probably Canada, Sweden, and Denmark. The major powers have, paper figures aside, been going ever more in debt. In Greece and Turkey, government finances are out of control, with revenues covering only two-thirds or less of expenditures. In general, the failure to approach budgetary balance, and with it price stability, has been a chronic condition of many Western economies.

Direct and usually progressive taxes on personal and corporate income and capital (including social-security payments) have become an increasingly important source of Government revenue since the

war. This trend reflects increasing concern in the West with income equalization and with maintaining strong consumer demand. The growth of direct taxes has also created new problems, for the revenues from such taxes fluctuate markedly in response to business conditions and, hence, are difficult to predict. Furthermore, high rates of direct taxation have an inhibiting effect upon savings and capital formation. For 8 countries for which both pre- and post-war data are available, the median increase in the share of government revenues derived from direct taxes has been 18 percent, with the largest rise (34 percent) applying to the United States.

Indirect taxes are those chargeable as a business cost and those levied on the purchase, possession, or use of real estate, goods and services. In general, indirect taxes are fairly certain sources of revenue, especially when levied upon land and upon articles of mass consumption. They have, of course, a regressive effect, with the heaviest impacts falling upon low-income groups and marginal enterprises. By the same token, they promote capital concentration and savings among high-income groups or by the State, which may be desirable in countries with low capital resources. Their role in the tax system of many Western nations has been diminishing, most sharply in the United States, Canada, and Sweden. In Norway, Denmark, and the Netherlands, however, the marked fall in revenues from government enterprises has forced greater dependence upon indirect taxes. Only in Turkey, Yugoslavia, and the countries of the Soviet bloc does increasing dependence upon this source of revenue appear to be a voluntary government policy. Nevertheless, indirect taxes are second only to direct taxes in importance: In Austria, Netherlands, United Kingdom, Denmark, West Germany, Norway, Canada, and Portugal (38.3 to 45.7 percent of the government revenue derive from this source), in France (49.8 percent), in Italy, Greece, and Turkey (54.5 to 58.5 percent). In the United States and Sweden the shares are exceptionally low (31.7 percent and 27.3 percent, respectively).

Revenues from government enterprises (post office, government railroads, etc.), have declined in importance in Norway, Denmark, Sweden, the Netherlands, the United Kingdom, France, and the United States, from a median share of 14.3 percent of all government income to 4.6 percent. Only in the United Kingdom, Canada, and Turkey did more than 6 percent of government revenues derive from this source in 1952–53.

Evaluating the tax systems in their entirety, one may divide the Western European countries, the United States, and Canada into the following four groups:

a. Over 60 percent of government revenue from direct taxes: Sweden, United States.

b. From 50 to 60 percent of government revenue from direct taxes: Norway, Denmark, West Germany, Belgium, Netherlands, Austria.

c. From 40 to 49 percent of government revenue from direct taxes: Greece, Canada, France, Portugal, United Kingdom.

d. Under 40 percent of government revenue from direct taxes: Turkey, Ireland, Italy.

10. Grave uncertainties characterize the statistical information on gross investment trends in constant prices in Western Europe, the United States, and Canada, with the valuation of construction being

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suspect. In general, however, it is clear that investment rates are substantially higher today than in prewar years.

Another present-day characteristic is the substantial role of government in investment either directly or through loans, transfers, and guaranties to private businesses and households. In France and the United Kingdom 45–60 percent of all investments rest ultimately upon government support; in West Germany, the Netherlands, Greece, Austria, and probably Denmark and Sweden as well, from 30 to 45 percent; and in Norway, Ireland, Portugal, the United States, and Canada, from 8 to 25 percent. In many countries, for example, the United Kingdom, the Netherlands, Sweden, dependence upon the government is increasing. In the United States and Canada, it has fallen sharply since 1938 (appendix table IX).

The distribution of investments by industries, pre- and postwar, can be traced for too few countries to permit any determination of trends, 1938–53. Nevertheless, even the current data are suggestive when related to information on the shares of national income derived from the corresponding industrial sectors (appendix tables III and IX). They indicate the anticipated direction and, to some degree, rate of structural change in each economy. Thus, agriculture, forestry, and fisheries will probably develop fastest—relative to other industries—in the United States and Canada; next fastest in the United Kingdom, Western Germany, and Norway; more slowly in Italy, Turkey, the Netherlands and Denmark; and slowest in Ireland, Portugal, and Greece. In the countries last named, where low concentration on agriculture is combined with a low gross investment rate, actual declines in agriculture may well take place.

The highest intensity of investment in the fields of mining, manufacturing, and utilities, *relative to income currently generated*, may be found in Turkey and Greece; the lowest, in Norway, Denmark, and West Germany. Other countries, such as the United Kingdom, Italy, and the United States, are characterized by intermediate intensities. Norway, Denmark, Italy, Greece, and Turkey are investing most intensely in transportation and communications; West Germany and the United Kingdom, least intensely. Finally, the greatest concentration of investment in housing and services (relative again to income generation from these sources) occurs in Denmark, Western Germany, Ireland, and Greece. The United States, Italy, the Netherlands, and Norway are in an intermediate position, while Turkey, the United Kingdom, and Canada put least emphasis upon these portions of the economy.

11. Forecasting the potential growth of the Western economies involves the consideration of numerous factors: Long-term trends; the growth of the labor force and other inputs; specific bottlenecks in foreign trade; taxation policy, and so forth. For these reasons, no aggregative forecast appears possible for the Western European economies. Each must be examined in the light of its own capacities and its own problems. At the present time, only a tentative division may be advanced between countries for which forecasts of continued growth appear justified on both historical and structural grounds, and countries in which stormy economic histories and present-day difficulties create uncertainty as to the future. Norway, Sweden, the Netherlands, the United Kingdom, the United States, and Canada may be placed in the first group. The potential rates of growth of the na-

tional products in this group vary considerably with forecasts of average increases of 4 percent per year for the United States, and perhaps 2.6 percent per year for the United Kingdom (each in its own price system).[10]

In the other European countries the outcomes depend upon many variables. For example, France has many conditions favoring rapid growth: Unused agricultural capacity, manpower reserves both in agriculture and handicrafts, rapidly rising productivity in manufacturing, and so forth. At the same time, low productivity and insufficient output in agriculture plus a chronic financial overcommitment of the Government inducing recurrent inflation are severe barriers to progress. Only if they are successfully attacked is France's future bright. Again, West Germany's recovery since World War II has been remarkable, with great credit due to effective taxation policies. But this should not obscure the fact that this recovery has been accomplished largely by rapid increases in labor input made possible by immigration, and by favorable terms of trade made possible by low wages and limited consumption. German productivity has risen only slowly; German equipment is far from modern. Should labor demand a greater share of the national product, Germany's competitive position in foreign trade and, indeed, its entire pattern of growth might be seriously endangered. Yet, should Germany restrain domestic demand, its vulnerability to fluctuations in world trade would remain extremely great.

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[10] See "Potential Economic Growth of the United States During the Next Decade," Joint Committee on the Economic Report. 83d Cong., 2d sess., 35 pages. Washington 1954.

Chapter XI. Economic Trends in the Soviet Union and Captive Europe

Three processes have dominated the development of the patterns of national income and expenditure in the Soviet Union and captive countries. The first has been the transition from economies largely characterized by peasant agriculture, handicrafts, and limited urbanization to those marked by substantial heavy industry, moderate urban services, and a subordinated agricultural sector; from economies distinguished by limited monetary circulation and low capital accumulation to those of a more dynamic cast. This transition took place in what is now East Germany and in Czechoslovakia before World War I. In the Soviet Union, it was virtually effected between 1928 and 1937. In Poland, it began in the late 1930's and was largely completed in the period 1946–48, thanks partly to a favorable shift in boundaries. In Hungary and Rumania, it is now underway, while in Bulgaria and Albania it is still to come.

The second process was that of economic mobilization, combat, and rehabilitation in World War II. In general, all of those countries, except Czechoslovakia and Bulgaria, suffered heavy losses in human life and in capital resources during the war. Beyond this, the effects of World War II varied widely from country to country. In the Soviet Union, territorial expansion, adding 10 percent to the country's population; lend-lease, UNRRA, postwar reparations and tribute from the captive states, the labor of prisoners of war, plus stern measures to increase labor input and the intensiveness of use of capital all served to soften the impact of war losses. In Poland, war losses and changes in territory drastically cut down the population, but at the same time industrial capital increased. In Czechoslovakia, the expulsion of the Sudeten Germans and the cession of Ruthenia to the Soviet Union offset gains through wartime investments in heavy industry. Both Poland and Czechoslovakia were given massive UNRRA aid. In contrast, Rumania, probably the most hapless of the captive countries, was robbed by Russians and Germans alike, bled white in World War II, forced to cede large territories, and received aid from no one.

The third process has been that of increasing militarization, with the rapid growth of expenditures on regular armed forces, security police and Communist Party apparatus, especially since 1949. This has been accompanied by growing disproportions in investment and in productivity between industry, especially heavy industry, and agriculture. Another concomitant has been the reduction in the share of personal consumption in the national product, sometimes aggravated by absolute drops in per capita consumption, as in Poland (1947–52, cf. appendix table XI–3). Finally, the captive countries have been forced to contribute heavily to the Soviet account (through the support of Soviet troops stationed within their borders, through artificialities in terms of trade, and through many other devices) and

to copy Soviet fiscal practice, such as primary dependence upon regressive taxation.

As results of these processes and of the operation of factors peculiar to each country (see Staff Papers on Poland and East Germany), the following developments have taken place in the national accounts of the Soviet Union and the captive countries of Eastern Europe. (Among the latter, data on Poland and East Germany, alone, are available with some degree of fullness and reliability. Studies on Czechoslovakia and Hungary are in progress, with some preliminary results available. For Rumania, Bulgaria, and Albania comprehensive studies have yet to be made.)

1. The national products of the Soviet Union and the captive countries, in fixed national currencies and at factor cost, have grown as follows: In the Soviet Union the gross national product in 1953 is estimated to have been 62 percent higher than in 1937, and 43 percent higher than in 1948 (at 1937 factor costs).[11] In Poland, the 1953 product exceeded that of 1938 by 36 percent; that of 1948, by 46 percent.[12] The Czechoslovak national income in 1953, in 1948 factor costs, is estimated to have been 24 percent higher than in 1937, but 39 percent higher than in 1948.[13] East Germany's national income in 1953 was believed to be 6 percent above that of 1936, and thus well below that of 1938.[14] But in East Germany, too, the period 1948–53 has been one of rapid increase, totaling 51 percent.

In all, the national products of the Soviet Union and the captive countries had risen, by the end of 1953, substantially *less* than had those of the United States, Canada, and the nations of independent Europe. On the other hand, their rates of growth, 1948–53, were considerably greater. Both phenomena are explicable in large degree to more extensive war damage and slower rehabilitation in the East than in the West; generally speaking, recovery from the war was completed 2 or 3 years later in the former area. In the most recent period of renewed expansion, the eastern growth rates have declined.

Annual rate of growth of national product in constant national prices [1]

Country	1948–50	1950–53
	Percent	*Percent*
Soviet Union	10	6.0
Poland	14	3.7
East Germany	12	6.0

[1] Calculated from data underlying tables X–1, XI–1, and XII–1.

2. While strictly comparable information is not available, it appears that the rate of economic growth in the Soviet Union and in East Germany since 1950, 6 percent per year in constant national currencies, corresponds to the rate achieved in these areas for a decade and more prior to World War II (appendix table II). In Poland and Czechoslovakia, economic expansion since 1937–38 contrasts with stagnation in the earlier period (appendix table II). Thus, while different mechanisms have been employed in the two areas, both the East and the West are manifesting greater economic dynamism than before World War II.

[11] Appendix table X–1.
[12] Appendix table XI–1.
[13] Estimate prepared by Mr. Ivan Matusek of the U. S. Department of State.
[14] Appendix table XII–1.

3. In the Soviet Union, Poland, East Germany, and Czechoslovakia, the relative importance of various economic sectors in the origination of the national income changed considerably in the years 1936–38 to 1952–53. The share of agriculture dropped markedly—from 36 percent to 23 percent in the Soviet Union, from 39 percent to 22 percent in Poland, from 27 percent to 13 percent in Czechoslovakia, and from 18 percent to 16 percent in East Germany. On the other hand, the share of industry, including construction and handicrafts, increased from 34 percent to 46 percent of the national income in the Soviet Union; from 36 percent to 51 percent in Poland, and from 41 percent to 52 percent in Czechoslovakia. In East Germany it remained stable at the high proportion of 57 percent of national income. The share of services has remained roughly stable at the low level of 25 to 30 percent of the national income.

In sum, the dynamic sectors of the eastern economies have been manufacturing, mining, construction, and, in services, the armed forces and transportation. Agriculture has stagnated or, as in Poland and Czechoslovakia, declined significantly.

4. Differences between the man-year productivity of the labor force in the industrial and the agricultural sectors were, by and large, greater in the East than in the West before the war. Thus, in 1936–38, the Soviet farmer originated only 31 percent as much income as did the worker and employee in industry, handicrafts and construction; the Polish, 24 percent; and the East German, 59 percent. By 1952–53, these differences had widened, so that agricultural productivity ran only 19 percent, 19 percent and 30 percent, respectively, in relation to industrial productivity (appendix tables X–2, XI–1, and Staff Paper on East Germany).

5. In the Soviet Union and Poland, *man-year* productivity (at constant prices) per person employed in the entire economy in 1953 was 37 percent and 45 percent higher, respectively, than in 1937–38. The primary determinants of these rises have been structural changes in the employment pattern, with large-scale manufacturing, mining, and transportation growing at the expense of handicrafts and agriculture; and increases in the length of the workweek (by 20 percent in the Soviet Union). In the Soviet Union, *man-year* productivity in transportation and communications was 54 percent higher in 1953 than in 1937; in large-scale manufacturing, mining, and utilities, about 36 percent higher. The corresponding figures for *man-hour* productivity are 28 percent and 13 percent. In agriculture, man-year productivity in 1953 was at least 15 percent below that of 1937, a bumper year, but slightly better than in 1940 (appendix table X–2).

In Poland and in East Germany even *man-year* productivity in the major economic sectors still remains at or below prewar levels. Polish output per man in large-and-medium scale manufacturing, mining and utilities is only 87 percent of the 1938 level; in contrast, the small transportation and communications sector has gained a productivity at least 25 percent higher (appendix table XI–1). No sector whatsoever of the East German economy appears to have surpassed the 1936, let alone the 1938, productivity levels, and output per man in agriculture remains notably low.

6. Important changes have taken place in the patterns of expenditure of the gross national product in the Soviet Union, Poland, and East Germany, and presumably in the other captive countries as well.

The share of *private consumption* has dropped notably, from 58 percent to 47 percent in the Soviet Union, 1937–53; from 77 percent to 45 percent in Poland, 1938–52; and from 64 percent to 50 percent (at market prices which exaggerate consumption) in East Germany, 1936–52. Correspondingly, the share of Government consumption has soared, from 20 percent to 27 percent in the Soviet Union, from 11 percent to 32 percent in Poland, and from 20 percent to 35 percent in East Germany. The major dynamic increasing Government consumption in the Soviet Union has been military expenditures, which rose from 8 to 15 percent of the gross national product (tripling in absolute size) between 1937 and 1953. In Poland and East Germany, Soviet exactions plus domestic military expenditures have led to the vast increases in governmental demand. In general, between 15 percent and 21 percent of the gross national products of the Soviet Union and the captive countries are either direct military expenditures, or their equivalent, in transfers to Soviet account. *These proportions, when set against a median of 5 percent for independent Europe and a figure of 14 percent for the United States, explain the persistent danger of Soviet-bloc aggression against the West despite the East's inferior economic stature.*

The shares of the gross national products devoted to gross investment have risen in the Soviet Union and Poland, from 21 percent to 26 percent, and from 12.5 percent to 23 percent, respectively, between 1937–38 and 1952–53. In Eastern Germany the 1936 investment rate of 15 percent has only recently been regained. In general, the countries of the Soviet bloc are distinguished by somewhat higher investment rates than in the West, as a whole, but like those of Scandinavia and West Germany.

7. Private consumption per capita appears to be at, or slightly above, late prewar levels in the Soviet Union, Poland, and Czechoslovakia. For Poland this represents a *drop* of some 18 percent since 1947. In East Germany consumption per capita has been rising since 1946, but it is still some 19 percent below the 1936 level.

Social differentiation is proceeding rapidly in Soviet-bloc countries. In the Soviet Union, especially, urban standards of living have risen substantally above prewar levels, particularly with regard to the availability of consumers' durables and entertainment. Agricultural living standards have fallen correspondingly. Furthermore, real income differences between occupations appear to have widened in the Soviet Union since 1937.

The high share of food in urban consumption in the Soviet bloc testifies to low standards of living:

Percent of food in budget

Country	1936–38	1953
Soviet Union [1]	57	50+
Poland [2]	48	64
East Germany [2]	38	39
Czechoslovakia [2]	46	65
Hungary [2]	40	64

[1] Table X–4.
[2] UN E/ECE/174 (1954, p. 64).

Finally, mention should be made of the greatly increased scale of educational and health expenditures in the Soviet bloc, even when estimates for the military and Communist Party elements hidden therein have been deducted. These compensate to some extent for the low and essentially stagnant levels of private consumption.

8. Data on government expenditures and revenues can be summarized in broad outline only, in the presence of many incompletely analyzed elements. In general, the *proportion of gross national product embraced* by total government expenditures (including transfers) has risen markedly in the Soviet bloc and, today, it averages possibly 60 percent at factor cost. Differences in accounting practice introduce some variations; in the Soviet Union, a large proportion of gross investment derives from self-financing by state enterprises and hence is excluded from the general government budget. In Poland, the budget includes virtually all financing of investment, except for the currently insignificant private sector. Overall, gross investment is the largest area of Government expenditure, somewhat exceeding military costs.

From the standpoint of *revenue*, two features are outstanding. First, is the great emphasis upon indirect taxation, primarily leveled at basic consumer goods. For such commodities as bread, and kerosene for lighting, taxes in the Soviet Union constitute more than 80 percent of the sales price. The second characteristic is the inclusion of forced bond purchases, and even voluntary savings, into "normal" revenue, a fact which makes possible "balanced" budgets and deficit-financing at the same time (appendix tables X–5, XI–5).

9. The outstanding characteristics of Soviet-bloc gross investment patterns are the very high proportions devoted to industry and the low proportions devoted to agriculture, particularly in relation to the incomes derived from these sectors (cf. appendix tables X–1 and X–6, XI–1 and XI–6).

10. The projection of the national products of the Soviet bloc countries to 1970 presents many difficulties. For the Soviet Union, somewhat more than a doubling, or a sustained rate of increase of 4.5–5.0 percent per year, *measured in 1934–37 factor costs*, appears to be a probable maximum under favorable conditions (see staff papers). This means that the gap between the United States and the Soviet Union is not likely to narrow appreciably, in percentage terms, especially if the effects of the differences in the price systems of the two countries on the apparent rates of growth are taken into account. In fact, the absolute gap should widen.

For the captive countries, profound political uncertainties prohibit the undertaking of long-term economic forecasts.

PART THREE: STAFF PAPERS

A. Population and Manpower

Knowledge of population characteristics and manpower trends rests fundamentally on national census data. Censuses have been taken since World War II by the United States, the countries of independent Europe and of captive Europe. Fairly reliable current data can be estimated from them. The Soviet Union, however, has not published results of a national census since those of the census taken in 1939, although some isolated facts and figures have been released. Consequently, data for the Soviet Union are more tenuous than for other countries. Some work has been done on regional aspects of European population and manpower. However, besides being relatively scarce, such data tend, like all aggregates, to conceal variations around the average.

REGIONAL POPULATION CHARACTERISTICS

Among the regions considered, the population of the United States is exceptional for its assimilative and integrative character even though it contains race and language minorities. The Soviet Union pursues measures of integration, or, more properly, Russian ascendancy over other Soviet peoples, but has much larger and more diverse minorities within its borders. Over 11 important ethnic groups are recognized, including more than 100 separate peoples.[1] No little authoritarian effort is needed to force Moscow's will on these many divergent groups. The political fragmentation of Europe is well known. Though relatively homogeneous racially, Europe's fragmentation echoes a Babel of national and subnational tongues. All such differences tend to weaken attempts at concise international comparison.

Another sort of difference between the countries of East and West is the uneven distribution of population in relation to territory. Some 1952 population densities, ranging from 331 inhabitants per square mile in Central Europe to 24 in the Soviet Union, are shown in the following table:

TABLE 15.—*Density of population in 1952, Europe, United States, and the Soviet Union*

Region or country:	*Inhabitants per square mile*
Europe	210
Central Europe	331
Southern Europe	207
Northern and Western Europe	155
United States	52
Soviet Union	24

Source: United Nations, Demographic Yearbook 1953, tables 1 and 1a. New York, 1954.

[1] Shabad, Theodore. Geography of the U. S. S. R., Columbia University Press, New York, 1951.

Most of the population of the Soviet Union is west of the Urals. The census of 1939 showed that two-thirds of the territory of the Soviet Union provided living space for 6 percent of the population, while 48 percent of the population was concentrated in 6 percent of the territory.[2] The population density of these western Soviet territories equals that in the most densely populated countries of Western Europe, even though the average for the Soviet Union is very low.

The average density figure for the United States is also low. The addition of Canada's figure, fewer than 3 persons per square mile, yields a North American average of 21 per square mile. Like the overall Soviet figure, this represents about 10 percent of the European average. North America and the Soviet Union are alike in having territorial scope for population growth. However, the Soviet and Canadian open lands contain large unusable portions, because of climatic and geographic factors.

The European average covers such disparate densities as 738 inhabitants per square mile in Belgium, 536 per square mile in the United Kingdom, 264 per square mile in Hungary, and 199 in both France and Poland. The high figures for Belgium and the United Kingdom are significant in the light of the relatively high standards of living for which these countries are also notable. Increasing productivity of labor means new economic frontiers when the territorial frontier no longer exists.

POPULATION CHANGES SINCE 1938

The density figures shown above reflect the position at the end of a period of great changes, including those brought about by war. In the following table figures are given for the beginning and end of the war decade and for the year 1952, which more or less coincides with the achievement of postwar European recovery. Estimates for 1954 are also shown.

TABLE 16.—*Regional populations on Jan. 1, 1938, 1948, 1952, and 1954; Europe, United States, and the Soviet Union*

[Million inhabitants]

Region or country [1]	1938	1948	1952	1954 estimate
Western Europe	247	268	278	280
Other Europe	48	49	51	52
Independent Europe	295	317	329	332
United States	130	148	156	161
Total West	425	465	485	493
Soviet Union	[2] 188	([3])	205	212
Captive Europe	[4] 96	89	92	[5] 92
Soviet Bloc	284	([3])	297	304

[1] See Glossary for regional groups.
[2] In postwar territory. Census of 1939 indicated 170,467,000 within prewar boundaries.
[3] Not available.
[4] Adjusted to postwar territory. Territory new East Germany estimated to contain 16,700,000.
[5] Bureau of the Census estimates total 72,695,000 for Bulgaria, Czechoslovakia, Hungary, Poland, and Rumania. Estimates for Albania and East Germany total 19,800,000.

Source: National data supplied by U. S. Bureau of the Census (see appendix) and General Statistics, OEEC Statistical Bulletin, July 1954.

[2] Balzak, Vasyutin, and Feigin. Economic Geography of the U. S. S. R., American edition, Macmillan Co., New York, 1949.

The significance of the impact on Europe's population of the war, and of the frontier changes and large-scale migration which followed, is obscured by examination in aggregative terms alone. For Europe as a whole, the losses directly attributable to the war (13 to 14 million people, or about 3½ percent of the population) were almost balanced by the natural increase of population. The impact varied sharply from country to country. In the Netherlands and Finland, for example, the losses totaled 3 percent of the population.[3] In Western and Northern Europe war losses were generally far outstripped by natural increase, and the age structure did not alter appreciably.

The United States underwent a phenomenal increase (almost 14 percent from 1938 to 1948) reflecting a sharp rise in marriage and fertility rates. The Soviet Union gained in total population also, despite war losses estimated as high as 20 to 25 million. Captive Europe lost population because of war casualties,[4] territorial losses to the Soviet Union, expulsions, and refugeeism.

For the longer period 1938–52, net changes are more clearly detectable; international migrations of refugees and expellees had been largely completed. The United States gained 20 percent in total population over 1938. Western Europe and the Soviet Union (within its postwar boundaries) each increased approximately 9 percent from 1938 to 1952. Independent Europe's population grew about 7 percent, reflecting smaller gains in Yugoslavia and Finland than in Western Europe and a net loss of population in West Berlin. Captive Europe still had an aggregate population in 1952 smaller by 4 percent than in 1938. If East Germany (which absorbed Volksdeutsche and expellees from Polish-held Silesia) is excluded from the original figures for captive Europe, the 15-year decrease is 12 percent (73 million compared to 79 million).

The totals given in table 16 for the West and the Soviet bloc indicate that the West is not only larger in combined population but grew more (a 16-percent increase compared with one of 6 percent) over the period 1938 to 1952. Wartime experience evidently penalized the Soviet bloc very heavily.

The estimates of population at the end of 1953 show that although the population of the Soviet Union is now about 30 percent larger than that of the United States, it is only 75 percent as large as that of Western Europe. The population of the 7 Paris Treaty countries[5] (210 million inhabitants) is about equal to the total Soviet population. The total of the Soviet bloc (304 million) is about 60 percent of the total West (493 million). China's population (claimed to be 580 million) gives the Communist bloc a great preponderance compared with this America-European "West." Alinements with the other one-billion-odd inhabitants of the Free World clearly have great importance in determining population balance with the Communist bloc.

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[3] United Nations Economic Commission for Europe, Economic Survey of Europe Since the War, Geneva, 1953, p. 6.

[4] Estimated to have been as high as 7 million. Lisinski and Nieburg, Outline of the Economy of Eastern Europe. Mid-European Study Center, New York, 1953.

[5] The United Kingdom, France, Federal Germany, Italy, Belgium Luxembourg, and the Netherlands.

TRENDS IN POPULATION GROWTH

Birthrates in Western Europe were relatively low in many countries [6] before the war, having declined because of depression and other factors acting to modify family decisions. A postwar phenomenon has been the tendency to higher rates, currently ranging from about 14.8 per thousand population in Austria to about 24.7 per thousand in Portugal. The United States has also experienced a reversal of prewar experience and now has a birthrate of about 24.5 per thousand. This has been the average birthrate over the whole of the postwar period. In the Soviet Union there has been a decline in the birthrate from just over 38 per thousand in 1938 to a current 27 per thousand. Birthrates in captive Europe are of about this order of magnitude or higher except in East Germany (14.9 per thousand) and Hungary (19.7 per thousand).[7]

Estimates of the change in the crude death rate of the Soviet Union since 1938 indicate a reduction from over 19 per thousand to under 12 per thousand today. An official, but doubtful, claim has been made that the Soviet death rate is down to 8.9 per thousand. Though it is possible this is true in some selective sense, it remains to be proven that the Soviet Union has one of the lowest rates in the world. Crude death rates in the lowest known cases,[8] for example, are 7.4 per thousand in the Netherlands, 8.3 in Norway, 9.3 in Denmark, 9.5 in Sweden, 9.6 in the United States, and 11.3 in the United Kingdom.

The effects of these rates and other factors [9] can be summarized in annual rates of increase of population. For the period 1948 to 1952 the average annual rate was 1.76 percent in the United States and about 0.9 percent in Western Europe.[10] The latter figure covers a range of −0.01 percent in Austria (which also had the lowest birthrate) to 2.41 percent in Turkey. In approximately the same period the Soviet population increased annually by amounts variously estimated from 1.5 to 1.7 percent. Over the shorter period, 1950 to 1952, captive Europe is estimated to have had an aggregate annual population increase of about 1.1 percent. Thus it appears that the United States and the Soviet Union are growing at faster rates than the other regions. Although Western Europe's rate of increase is lowest, its population increases about 2½ million a year compared with yearly increases of about 3 million in the Soviet Union. Conversely, the United States rate yields smaller increases in numbers than does the rate for the Soviet Union. Expected results of these increases are compared in the discussion of population projections.

SOME ASPECTS OF POPULATION STRUCTURE

The age and sex distributions of each population are important determinants of its economic capabilities. Current and future trends in economically active populations can be partly deduced from the proportions of total population in "working-age" groups, "retirement

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[6] The extraordinary measures to raise birthrates in the Axis were taken because trends were stabilized at lower levels.
[7] See appendix tables XV, XVI, and XVII.
[8] Data released at the World Population Conference held in Rome, 1954.
[9] Factors, such as marriage rates, fertility, or mortality.
[10] The foregoing data from General Statistics, OEEC Statistical Bulletin.

age" groups, and pre-working-age groups.[11] Although complete discussion is not possible, some salient aspects of such trends can be indicated.

In Western Europe, the age structure of the population did not alter appreciably over the war decade. Since the upsurge in birthrates, somewhat larger proportions of the population is in the preworking ages (under 14). About 10 percent of the total population is in the so-called retirement age, 65 and over. The long-term decline of western death rates and consequent lengthening of life has brought about a prominent feature of the population structures of western nations, namely, the tendency toward higher average age. This "aging" can have obvious repercussions on the economic viability of countries.

The United States is apparently following a similar trend. In 1953 about 72 percent of total United States population (117 million) was 14 years of age or older. Partly because of the resurgence of American births, increase in the working-age groups has been small compared with the phenomenal growth in population in recent years.[12]

In the Soviet Union, on the other hand, the increase in survival rates just prior to World War II is paying off now in additions to the working-age groups. About 66 percent of the Soviet population was 15 years of age and over in 1950. While near the European average, this percentage includes a smaller proportion of persons age 65 and over. The captive countries apparently follow the American proportion in population of 15 and over (about 73 percent in 1952) although the shorter life expectancy, war losses in the working ages, and high birthrates of recent years have led to growth in the preworking ages.

Every western country (including the United States) now has more females than males in its population, except Ireland. In the Soviet Union females made up about 53 percent of the 1950 population. During the years just following World War II the proportion of females to males was particularly high in the 25 to 44 age group. It has been estimated that the number of males in this group was reduced one-fourth over the war decade. In captive Europe the female population nearly equals the male population, except in Eastern Germany, where females outnumbered males 5 to 4 in 1950.

LABOR FORCE TRENDS

Since the age structure of the population of Western Europe did not alter appreciably during the war, the number of people available for productive labor grew with total population. In 1948, after industrial production in Europe as a whole had regained its prewar level, European industry employed nearly 10 percent more people than in 1938.[13]

The low level of output per man which these figures imply was occasioned largely by the fact that important segments of European industry were working far below capacity owing to irregular supplies of raw materials and other production bottlenecks. Since output per man was low, it was natural that big increases in output should mate-

[11] Conventionally set to include ages 15 to 64, 65 and over, and 0 to 14, but differences in sources available affect age structure discussion throughout this paper.
[12] Department of Labor, Bureau of Labor Statistics, Fact Book on Manpower, Bulletin No. 1171, Washington, September 1954.
[13] United Nations, Economic Commission for Europe, op. cit.

rialize, as bottlenecks were broken, without corresponding increases in employment. In the 4-year period 1948–52, industrial production in Europe increased 50 percent, an accomplishment brought about by a 40-percent increase in output per man together with a 10-percent increase in employment. The percentage increase in employment in the manufacturing industry between 1938 and 1952 was greater in Western Germany than in the United Kingdom, and in both it was considerably greater than in either France or Italy.

In 1953, about 125 million persons were included in the labor forces of Western Europe.[14] The United States in the same year had a labor force of 67 million, compared with 55 million in 1939.

Estimates indicate the Soviet employable labor force totals between 105 million and 110 million, compared with about 95 million in 1940.[15] Seventy-five to eighty percent of all males and females aged 15 or older are believed to be in the labor force. The equivalent United States figure for 1953 was 57 percent which, while indicating the existence of large labor reserves in the United States, gives pause to students of comparative economic strength. The difference arises from two causes mainly: the much higher employment rate of women in the Soviet Union (about 54 percent of those age 15 and over as opposed to about 33 percent in the United States) and the smaller numbers of those who attend school full time. In Western Europe, labor participation rates range from 63 to 69 percent for males and somewhat lower for both sexes above age 14.

The postwar position in the Soviet Union has been gravely affected by wartime events. Under the threat of war with Germany, new measures were taken to recruit and train labor for industry, to stabilize the staffs of enterprises, to utilize compulsion regarding transfers and to lengthen the working day, and to ensure the supply of qualified personnel in the places where they were most urgently needed. In the early part of the war the Soviet economy suffered great losses of manpower, and productivity fell seriously in many sectors though it later rose again as the economy was switched to a wartime footing.[16] This was particularly true in the war industries which absorbed most of the available manpower at the expense of consumer goods production. Major movement of labor to the eastern regions of the Soviet Union took place, the effects of which persist in the economy since the war.

During the war, working hours were raised 50 percent; the proportion of women in urban employment rose from 38 to 53 percent (the highest wartime participation in the United States was 39 percent). Between 1940 and 1950, over 7.5 million are thought to have been added from this source alone, and children were drafted into the State Labor Reserve. With measures such as these and with the evacuation of men from German-occupied territories, the Soviet Union mobilized 30 million men and 5 million women to maintain the armed forces and to replace 20 million casualties. The war reduced the number of males in the working-age groups, forcing the country to depend primarily on women workers, especially in agriculture. About 3.5 million women

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[14] International Labor Office, Year Book of Labor Statistics, 1953, Geneva, 1953.
[15] Shimkin, Demitri B. Manpower and Manpower Problems. Studies in Business Economics No. 44, National Industrial Conference Board, May 1954.
[16] Barker, G. R., Soviet Labor, Bulletins on Soviet Economic Development No. 6 (Series 2), June 1951. University of Birmingham, and Frederick Praeger, Inc., New York, N. Y.

were estimated to have been working in the transport industries in 1946–47. As a result of these events, Soviet citizens suffered a decline in living standards from their already low level. Consumption, housing, and real income fell symptomatically and, despite rises in the last 2 years of the war, the reconversion of the economy began under very low level conditions.

During the fourth 5-year plan (1946–50) the labor force surpassed both the prewar level and the planned level. Some 7 million workers were added to the Soviet nonagricultural labor force, 6 million above the number called for by the plan. This was managed through partial demobilization, continued labor conscription of 14- to 17-year-olds and pressure via currency conversion to force urban women into factories (maintaining wartime employment rates) as well as the acquisition of new territory.

Little statistical information is available on the labor forces of captive Europe. Recent estimates indicate that as many as 8.5 million persons are now engaged in industrial employment.[17] The additional manpower needed to carry out the industrial plans made since these countries fell into the Soviet orbit has been drawn from the handicrafts and secondarily from the pool of impoverished farm workers. Strong mobilization measures have been instituted by all the captive countries. Women and minors, in addition to their large role in unpaid farm work, have been increasingly induced to enter industry, trade, and office work through economic pressure. However, low agricultural productivity implies a deceleration of such labor transfers. The Economic Commission for Europe has reported signs of such a deceleration.

In Soviet agriculture, women comprise at least 60 percent of all workers; in nonagricultural employment about 50 percent. Public health, education, municipal services and commerce have become the special preserve of women, who constitute from 60 to 80 percent of the numbers active in those fields. Over half the women in the Soviet Union aged 15 and older are regular members of the labor force. Some estimates as high as 70 percent have been made to account for seasonal and part-time work by women.

Some southern countries of independent Europe (Turkey and Yugoslavia) have equally high participation by women in their labor forces. In Italy, Belgium, and the Netherlands,[18] at the lower end of the range, the proportion of women in the labor force is under 20 percent. In Britain there has been a noteworthy shift from domestic to industrial employment.

Participation in the paid labor force is also increasing among American women, particularly married women. In 1940 about 27 percent of all females age 14 and over were in the labor force; by 1953 this proportion had increased to 32 percent. This is still far below the Soviet figure and implies a sizable labor reserve.

The hours of work vary a great deal among the regions under study. In United States manufacturing industries the average is about 40 hours. In Western Europe the median appears to be about 45 hours, ranging from 39 in Italy to 48 in Federal Germany. The Soviet Union enforces a 48-hour minimum in contrast to the prewar (1937)

[17] Lisinski and Nieburg, op. cit.
[18] International Labour Office, op. cit. The percentage in Spain is 8.3, which may be due to a different basis for reporting.

average of just under 40. No average is available for captive Europe but it is noteworthy that a 6-day week is required by law in each country; about 46 or 48 hours minimum seems to be the rule in industry.[19]

DISTRIBUTION OF LABOR

The distribution of manpower between sectors of the economy also affects economic growth patterns and potential. From 50 to 55 percent of the Soviet labor force is still in agriculture. Of the civilian nonagricultural labor force (38.5 million persons in mid-1953) little more than a third are in government, commerce, education, and other services.[20] In 1953, 70 percent of all industrial workers were employed in heavy industry which accounted for 70 percent of total industrial production. In manufacturing and mining, the largest single employer is the machine-building and transportation-equipment group with an estimated 4.4 million persons in 1952. All other manufacturers of producers' goods together employed 6.6 million persons in the same year, while consumers' goods producers employed 5.7 million persons, or 30 percent of the number in mining, manufacturing, and utilities.

In the United States, by way of contrast, only 11 percent of the total number of employed persons is in agriculture. This share has been falling for some time and will continue to do so. Of nonfarm employees, 40 percent are in manufacturing and mining.

An estimate of the early postwar population of captive Europe in agriculture, uncorrected for border changes or population transfers, is put [21] at 51 percent of the population compared with 54 percent before the war. This seems to credit the captive countries with too much success in the diversion of labor from agriculture. Percentages based on Bureau of the Census estimates indicate Czechoslovakia had only 37.7 percent of its postwar labor force [22] in agriculture; Hungary had 51.6 percent in 1949; while Yugoslavia (introduced for purposes of comparison) had over 70 percent of its labor force in agriculture as recently as 1953. Four countries (Czechoslovakia, Poland, Rumania, and Yugoslavia) employ 62.7 percent of their labor force in agriculture, 28.2 percent in nonagriculture, and 9.1 percent in other sectors of the economy. An average over 60 percent would seem to be fairly realistic for captive Europe. Despite efforts to enforce the shift of labor to heavy industry, over half the active males in captive Europe are still in agriculture.

A similar condition exists in the southern countries of independent Europe. In northwestern industrial Europe, on the other hand, less than one-fifth of all active males are employed in agriculture. In 10 of these countries, employment in industry has increased 20 percent or more over 1938.[23] The latter year was one of heavy unemployment, but the achievement nonetheless bears comparison with programs of forced industrialization. Particularly noteworthy is the growth of employment in Federal Germany despite the setbacks of war. A large increase in the labor force was absorbed, and unemployment in 1953 was just over 6 percent of the total employed.

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[19] Bureau of Labor Statistics, Division of Foreign Labor Conditions estimate.
[20] Shimkin, D. B., op. cit.
[21] Lisinski and Nieburg, op. cit.
[22] See appendix Ia.
[23] United Nations, Economic Commission for Europe, op. cit., table 51.

A special aspect of labor in the Soviet bloc is the use of forced labor. Forced labor, as differentiated from forced settlement or other punitive labor measures, has probably involved from 3½ million to 5 million persons in the Soviet Union at one time or another.[24] The numbers involved in captive Europe are even more difficult to ascertain. However, exploitation of otherwise untapped resources in vast areas of the Siberian North and Far East, carried out under the MVD, currently depends upon the use of concentration-camp labor.

UNEMPLOYMENT AND PRODUCTIVITY

One important, but frequently overlooked, aspect of the rural concentration of societies like those in the Soviet orbit, is unemployment or underemployment. Unemployment is difficult to compare between countries because of differences in concepts.[25] Theoretically, no one is unemployed in the Soviet Union although certain categories of persons such as apprehended criminals are officially designated unemployed.

In the United States the concept used is that of job seeking, which omits those on shortened workweeks, those doing part-time work, and the like. The Soviet concept of employment includes everyone with an income of any sort. People in institutions and those on pensions are considered employed; the concept is one of "care" or "with income." However, absenteeism, work-time effort spent seeking the necessities of life through a maze of bureaucracy and shortage, and low man-hour productivity contribute to a sort of planned economy unemployment. The nonutilization of resources due to faulty central planning of requirements "will appear not as unemployment but as low productivity—hidden unemployment." A market economy operating through "a pricing system minimizes hidden unemployment. Moreover, it can avoid open unemployment by fiscal measures which do not deprive the market of its autonomy." [26]

The course of unemployment in the West is fairly familiar. The United States suffered heavy, long-term unemployment before the war but has been notably successful in keeping near "frictional" levels since the end of wartime overemployment. Western Europe had a similar prewar period of stagnation. Now there is a pattern of full, or even overfull, employment in the highly industrialized economies in the Northwest, but considerable chronic hidden unemployment in southern countries.

Output per man-hour in the United States has increased for about the last 30 years about 3 or 4 times as fast as the growth of population. Output per man-hour in manufacturing is continuing to grow at about 2 to 3 percent per year.

In the Soviet Union it is estimated that average man-hour productivity in manufacturing and mining in 1953 was about equal to that achieved in 1937 (measured in constant United States prices).[27] In that year, Soviet man-hour productivity in manufacturing was

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[24] For fuller discussion, see ch. XI.
[25] For an interesting discussion, see Jaffe, A. J., and Stewart, C. D., Manpower Resources and Utilization, New York and London, 1951, especially pp. 69–74.
[26] Oxenfeldt, A. R., and van den Haag, E., Unemployment in Planned and Capitalist Economies. The Quarterly Journal of Economics, February 1954.
[27] Shimkin, D. B. op. cit., p. 60. See also Staff Paper J, section 3, this study.

about 30 percent of that in this country. Man-year productivity in 1953, however, was 20 percent higher than in 1937 because of the lengthened workweek.

According to published official Soviet figures, great annual gains have been made in recent years, ranging from 15 percent in 1948 to 6 percent in 1953.[28] The figures are related to man-year productivity for a part of the labor force only but are probably accurate in giving the trend of high, but steadily declining, annual increases during the period of postwar recovery. Despite these claims, Soviet authorities complained at the end of 1954 that industrial progress is being achieved through greater numbers at work rather than higher skill. They reported the category "workers and employees" had shown exceptional growth for the second straight year, having risen 2.1 million in 1954 alone to a total of 47 million.

Output per man in European industry reportedly increased 40 percent between 1948 and 1952,[29] which was also partly achieved because gains through restoration are easier to make than new gains. Man-hour productivity in Western Europe, according to the OEEC, had risen 18 percent over 1938 in manufacturing and 25 percent over 1948 by 1953. However, as in the Soviet-United States comparisons, the relative productivity of labor is low in Western Europe. Recently released data show the value added by labor in manufacturing in 1950 was 34 percent of that in the United States, in Belgium and the Netherlands, 37 percent in Denmark and Norway, 30 percent in France and the Saar, 32 percent in Germany, 20 percent in Italy, 15 percent in Spain, as high as 49 percent in Sweden, 45 percent in the United Kingdom,[30] and 78 percent in Canada.

A fundamental consideration in seeking increased productivity is the training of sufficient specialists and technicians. The current controversy concerning alleged Soviet progress in outstripping the United States in college training of scientists and engineers reflects the importance attached to the problem.[31] Education in the Soviet Union increasingly emphasizes training designed to forward her materialistic aims.

In 1952 graduates of universities in the Soviet Union working in industry, agriculture, and health totaled 860,000 compared with 358,000 in 1937. Among them were some 475,000 engineers and natural scientists. Soviet plans call for an increase to 550,000 or more. In 1950, the peak year, United States engineering schools granted 52,000 bachelor's degrees. It is reported that 53,000 engineers were graduated in the Soviet Union in 1954, an increase of 13,000 over the previous year. The proficiency of Soviet-trained engineers is generally considered to be equal to that of our own although some doubt exists concerning definitions used. Our recent annual output of about 25,000 engineers would not suffice, if the 1954 level were to be maintained in the Soviet Union, to keep abreast of the Soviet Union in terms of the total number of engineers available, nor, eventually, of the number per

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[28] Bureau of Labor Statistics, Division of Foreign Labor Conditions, December 10, 1954.
[29] United Nations, Economics Commission for Europe, op. cit., p. 146.
[30] Dresch, Francis W. Stanford Research Institute, Productivity in Manufacturing in the Postwar Period in Canada, Western Europe, and the United States. Stanford, Calif., Sept. 15, 1953.
[31] See, for example, Science for July 2, 1954, which contains various articles on this subject.

capita. At present the Soviet Union appears to have more engineers per industrial worker than the United States. However, European science and American development have created a large industrial lead for the West, and they may well retain it. "Experience shows that speed of economic progress depends much more on the level of general than of technical education." [32]

URBANIZATION AND HOUSING

Most aspects of migration have been omitted from this short survey. International migration is neglected on the theory that such movement is largely within the blocs or regions under consideration and so causes little change affecting comparison of total figures. One aspect of internal migration, movement into cities, is noted because urbanization affects the rapidity with which industrialization can be pursued.

About half the annual Soviet population growth, roughly 1½ million people, is in urban areas because of such in-migration and natural increase. The urban population was about 86 million persons by the end of 1953 or about 41 percent of the total. The United States, by contrast, was 64 percent urban by the conventional definition at the time of the 1950 census. Western Europe, being much more stable than either of those nations, faces problems of replacement and new building for normal growth rather than new trends toward urbanization. Northern and Western Europe are already characterized by a degree of urbanization which in some countries exceeds that of the United States. The more rural southern countries do not now offer sufficient opportunity for farmworkers in industry to cause acute new problems of urbanization.

In the United States the difficulties raised by a 2½-percent increase in the urban concentration over 1940 are familiar. The problem of the Soviet Union is even more intense because the gain has been 40 percent since 1940. Over the same period, 1940–53, the rural population of the Soviet Union dropped some 13 percent. The core of the Soviet problem lies in the provision of urban housing and facilities in places where they have always been insufficient by Western standards.

No country in Europe is building enough houses to care for its normal population growth. In most European countries, both free and captive, standards of housing are below those of 1937.[33] In 1953 Europe had its best house-building year since the war. The rate varied from 10.5 dwellings to 1,000 inhabitants in Norway, and only slightly less in Federal Germany, to 2.3 dwellings to 1,000 inhabitants in France.

Behind the Iron Curtain some of the state building industries seem to have been even less productive. The figure given for Rumania is only 1 dwelling per 1,000 inhabitants put up in 1953. For Czechoslovakia it was 3.2; for Hungary, 1.7. The Soviet Union reportedly built 5.3 dwellings per 1,000 inhabitants last year, which is about equal to the average rate for Western Europe. Four or five persons

[32] Marjolin, Robert. Europe and the United States in the World Economy. Duke University, Durham, N. C., 1951.
[33] United Nations, Economic Commission for Europe. Quarterly Bulletin of Housing and Building Statistics for Europe.

are crowded into each room in the Moscow region, and present rates of building are not rapid enough to make improvement possible while the present rate of urbanization continues.

The data for Western Europe are inadequate but in nearly every country there are fewer dwellings of all kinds per capita than before World War II. Only Sweden seems to be building at a rate that adequately covers an increase in the number of families. But Sweden does not have a very high standard of housing in terms of space per person. A large part of the blame for inadequate rates of construction can be traced to rent policies that keep rentals below real costs. The rate of building is inadequate in Europe but at least not an insurmountable obstacle to national economic programs. Western Europe is already largely urbanized, and the present characteristic of the whole area is the low mobility of labor, both vocationally and geographically. In the Soviet bloc, on the other hand, industrial and expansion plans depend on increased urban manpower. Yet a rapid increase of industrial labor input cannot be accomplished without further crowding of the already inadequate housing of Soviet and East European cities.

PROJECTED POPULATION TRENDS

On the basis of the projections prepared for OEEC appearing in various publications,[34] the total population of Western Europe should reach about 303 million in 1970. Projections prepared by the Bureau of the Census for Spain, Yugoslavia, Finland, and West Berlin total about 60 million in the same year giving a projected population for independent Europe of about 363 million.

The Economic Commission for Europe has called attention to the widening of the gap between the level of economic development in the industrialized regions in northern Europe (where industrial growth has been rapid and unemployment and underemployment have gradually been eliminated) and that in southern Europe where industrialization has been hampered by poverty, population pressure, and unemployment. The Commission estimates that population trends over the next decade probably will be such as to result in a further widening of this gap.

In the highly industrialized countries of Western Europe, by way of contrast, the rate of increase in the population of working age is already lower than in the southern countries, and it probably will decline even further. It is probable, for example, that in the United Kingdom the working population will become as stable as the French population is now and, unless there is a new migration wave from the East, the working population of Western Germany will increase more slowly than heretofore.

According to the Economic Commission for Europe, there will, notwithstanding smaller increases in the working-age population, be far greater possibilities for expansion of industrial output in Western Europe than in southern Europe, where population pressures make such expansion more urgent. If, however, industrial production should lag in northwestern Europe, the situation in southern Europe

[34] Fourteen of the 18 member territories are included, for example, in projections shown in Economic Conditions in Italy, Banco di Roma, Rome, July 1954.

will be even more serious since that area depends so heavily upon exports of raw materials and foodstuffs to the northern countries.

Projections to 1970 for the countries of captive Europe indicate a regional total of about 99 million for that year. Apparently the 1938 population of 96 million will not be reached before 1956 or 1957. Drawing on the work of Warren Eason,[35] the Bureau of the Census estimates the population of the Soviet Union in 1970 will be about 282 million. This is the upper range in Eason's work, the low being 244 million. Some demographers consider a figure of 255 million the most likely while others use an estimate of 282–288 million. A long-range projection was presented by Soviet delegates to the 1954 World Population Conference in Rome[36] indicating the 1980 population would reach 290 million. In view of these differences a range of 260[37] to 280 million does not seem out of line.

The 1970 population of the United States probably will be about 204 million. The figures on projected population are shown in the table below.

TABLE 17.—*Population on Jan. 1, 1954, and in 1970 and percentage change: Europe, United States, and the Soviet Union*

[Millions of inhabitants]

Country or region	1954	1970	Increase (percent)
Total West	493	567	15
United States	161	204	27
Independent Europe	332	363	9
Western Europe	280	303	8
Soviet bloc	304	359–379	18–25
Soviet Union	212	260–280	23–32
Captive Europe	92	99	8

Source: See preceding text.

According to these figures, the population of the West will grow about 15 percent over the next 16 years while that of the Soviet bloc will grow as much as one-quarter. The West will have the greater total population, but the Soviet bloc population will apparently become equal to or larger than that of independent Europe. As in other spheres, the dynamism of the United States provides the main element of growth in western trends while the Soviet Union provides that element in its orbit.

Little work of a comparable nature has been done on the future age structures of the regional populations. Indications for Western Europe are that about 66 percent[38] of the 1970 population will be in

[35] Eason, Warren, in Soviet Economic Growth, Abram Bergson, editor, N. Y., 1953.
[36] Raybushkin, T. V., and L. U. Pissarev, Associated Press dispatch in Washington Post and Times Herald, September 3, 1954.
[37] Eason's projection based on falling crude birth rates and death rates.
[38] For 14 countries. See Banco di Roma, op. cit.

the age group 15–65, and about 15 percent (compared with the current 10 percent) in the age group 65 or over. Applied to Western Europe the working-age group percentage indicates about 201 million people in those ages. While less valid for independent Europe, the same percentage indicates about 241 million persons aged 15–64 in 1970.

In captive Europe, a working-age group of ages 15 to 59 years will total about 62 million. In both captive Europe and the Soviet Union, life expectancy now is shorter than in the United States or many countries of Western Europe. Therefore, the problem of "aging" population in the Soviet bloc is deferred until such time as standards of medicine and hygiene approach those of the West. The United States has not as great a problem as Western Europe, but the projected percentage of persons aged 65 and over is almost 10 percent of the 1970 population.[39]

By 1960, some of the United States population trends of the past decade will have been modified or even reversed, according to the latest available Census Bureau projections. The wartime and postwar upsurge in the birthrate will be reflected in a sharply increased population in the 10–19 age bracket. Even if births are maintained at current high rates for the rest of this decade, the relative increase in the population under age 10 will be smaller than the 1940–50 relative gain. Similarly, the older population—65 and over—will grow somewhat more slowly, although still at a rate greater than that of the entire population. On the other hand, the population in the 20–64 age span, from which nearly all of the labor force is drawn, will show an even smaller relative increase than in the preceding decade.[40]

Some interesting projections have been made [41] comparing the future population growth of the United States with that of the Soviet Union for the period ending 1970 on the basis of (1) working-age group 15–54 years and (2) prime military age for males, 20–34. Since most of the persons included in these projections are already born, the projections do not involve the uncertain factor of birthrates. Death rates are generally low and probably will not change greatly, assuming no major war. Chart II shows the results of the projections.

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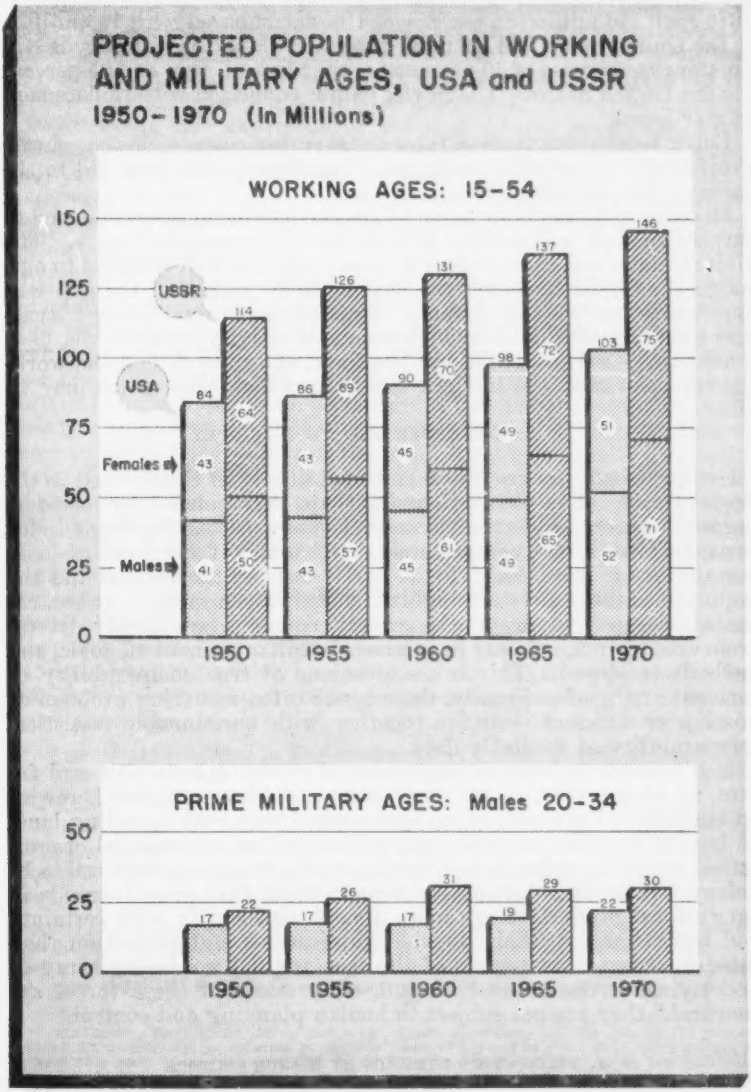
[39] Rucker, Allen W., Economic Challenge of Longevity, Harvard Business Review, November–December 1954.

[40] Bureau of Labor Statistics, Fact Book on Manpower, Bulletin No. 1171, September 1954.

[41] Thanks are due Eugene M. Kulischer and Michael Roof for permission to use these data.

CHART II



SOURCE: Dr. Eugene M. Kulischer and Michael K. Roof

The projections indicate that for the period 1950–70 the total number of persons in the 15–54 age group in the Soviet Union will increase 28 percent and in the United States will increase 22 percent. The margin between the 2 countries in this age group will be greatest in 1970 with 146 million in the Soviet Union compared with 103 million in the United States. With regard to males alone, the disparity is still greater: an increase of 40 percent for the Soviet Union and 25 percent for the United States. The Soviet gain is connected with replacement of war losses.

Labor force participation rates are even less susceptible to accurate projection than population figures. Insufficient data have led to the omission here of labor force projections.

In conclusion, the population of the Soviet bloc appears destined to surpass that of independent Europe in the foreseeable future. The United States and independent Europe, together, will continue to outweigh the Soviet bloc over the next 15 to 20 years, but the gap will apparently narrow considerably. Furthermore, trends in age structure seem more favorable to high economic activity in the Soviet bloc. Productivity advantages in the West and efforts to extend the working-age span seem the likeliest means by which these gains may be offset.

B. Agriculture and Food Supply

Growth trends in agriculture and food supply in Europe and in the Soviet Union can be observed, and perhaps extrapolated, by considering several more or less related and relevant aspects. No single index or aspect alone can serve adequately, particularly if any forward-looking attempt is involved. This is partly because the nations and the populations themselves are highly diverse. Even more, it is because the agricultural sectors of the several economies are highly diverse from area to area, not only in products but in organization, goals, and methods employed. This raises questions of true comparability of concepts and goals. Finally, there is the often-recurring problem of missing or deficient statistics together with questionable statistical comparability of available data.

It is possible to form an impression of growth trends, past and future, by examination of the incomplete material presented herewith on agricultural production, on agricultural resources including land, on land utilization, on yields and utilization, on agricultural organization, including reforms, and, finally, on the state of agricultural technology. However, it should be kept in mind that growth trends in agricultural production are more difficult to identify with certainty and less reliable in their possible implications and projection than those for some other sectors of the economy. A confusing array of underlying forces is involved and, since many of these forces are "natural," they are not subject to human planning and control.

1. Production: Trends by Major Sectors

In an economy which is struggling upward after war there probably is no better indicator of the degree of agricultural recovery than

the *volume* of *food crop* production.[42] Much of Europe during the war and in the early postwar period was lean and hungry. Agriculture, though less vitally damaged than some other sectors of the economy, was seriously dislocated and disorganized. Fortunately, food and fibers were availabe from outside Europe—particularly under lend-lease, UNRRA, and the Marshall plan, much more than the customary import contribution was provided, not only to the immediate food supply but, fully as important, to the rehabilitation, revitalization, and expansion of the agricultural production plant. Production statistics, as in table 18 labeled "Europe," rarely apply to the whole Continent, Eastern Europe commonly being excluded or underrepresented. Yet such statistics on Europe suggest that there has been a remarkable recovery since the early postwar period.

(*a*) *Independent Europe*

Hard hit by the destruction and diversions of the war, by the dislocations and disorganization of the early postwar period, and by some bad luck with weather, gross agricultural production in Western and Southern Europe (much of which later comprised the OEEC countries) in 1947–48 was only about four-fifths as high as prewar.[43] After 1947 much of the very substantial reconstruction aid from outside was applied to the OEEC countries which, by and large, were the more industrialized sectors of the continent and normally the world's major food importers. The years 1948–50 covered the main period of postwar reconstruction in northwestern and southern Europe agriculture. During that period the annual rate of increase was very high. By the end of that period production was about 14 percent higher than before the war. Not until 1950–51 did the production per capita in Europe (excluding Eastern Europe) exceed the prewar level. Table 19 indicates that recovery as to livestock products kept pace with general agricultural recovery in this area.

Since then progress has been much slower, and the estimated expansion possibly tends to overstate recent development. But expansion has continued:

> Agricultural production in Western Europe as a whole in 1953–54 was greater than in any previous year and easily surpassed the previous record of 1952–53, both in crops harvested and livestock production.[44]

A main urge to expand production since reconstruction was largely completed has come from Europe's currency difficulties. As might be expected, the recovery has not been uniform in time or from area to area as may be noted in the following statement:

> Agricultural production in northwestern Europe rose 2 percent in 1952–53, continuing its upward trend and keeping pace with population growth. In Mediterranean Europe agricultural production declined slightly below the previous year and crop yields per hectare continued below prewar.[45]

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[42] Admittedly, such statistics do not make direct allowance for changes in the proportion of the nutritionally desirable protective foods of animal origin. Even such a measure is available only in a comparatively crude form and not well tied in to the particular areas in which we are interested.

[43] Prewar in this discussion, unless otherwise specified, refers to the years 1934–38.

[44] FAO. The State of Food and Agriculture, 1954, Review and Outlook, Rome, August 1954, p. 61.

[45] FAO. The State of Food and Agriculture, 1953, Pt. I, Review and Outlook, Rome, August 1953, p. 6.

TABLE 18.—*Index of volume of production of food crops, by regions, 1946–47 to 1956–57 (estimated)*

[Base: 1934–38 = 100]

Regions	1946–47 [1]	1947–48 [1]	1948–49 [2]	1949–50 [2 3]	1950–51 [2 3]	1951–52 [3]	1952–53 [4]	1953–54 [4] (preliminary)	Estimated [5] 1956–57
Europe (excluding Soviet Union)	76	74	92	(89) 91	(96) 95	100 [6] [114]	[6] 114	[6] 121	[6] 122
North America	135	129	161	(145) 150	(145) 151	144 [138]	152	150	150
Latin America	114	120	114	109	120	[124]	136	138	155
Far East	90	93	98	(96) 95	(99) 98	100 [7] [100]	[7] 105	[7] 109	[7] 118
Africa and Near East—Near East				(109)	(118)	123	133	140	152
Africa			114	112	119	[124]			
				(118)	(118)	118 [132]	134	134	150
Oceania	96	111	110	(120) 120	(114) 108	110 [106]	117	120	123
World (excluding Soviet Union)	95	96	109	(106) 106	(110) 109	111 [8] [119]	[8] 126	[8] 128	[8] 135
World						[9] 113	[9] 117	[9] 120	[9] 134
Soviet Union [10]					118		128		176

[1] Based on 53 countries. Source: FAO, The State of Food and Agriculture, 1948, p. 9.

[2] Index numbers are based on the production of wheat, rye, barley, oats, maize, rice, potatoes, sugar, and oils. Uniform price weights are applied to total output without deduction for quantities fed to livestock. Source: FAO, The State of Food and Agriculture, Review and Outlook, 1951, p. 5.

[3] Food comprises wheat, rye, barley, oats, maize, millet, and sorghum, rice, dry beans, dry peas, broad beans, chick peas, lentils, unspecified pulses, sugar, potatoes, sweet-potatoes, vegetable oils, animal and marine fats and oils and meat. Figures in parentheses for years 1949–50 and 1950–51 fall under this definition as does the regular column for 1951–52. Notice that the Near East and Africa are indicated separately beginning with 1949–50. Source: FAO, The State of Food and Agriculture: Review and Outlook, 1952, p. 15.

[4] The method of calculation of the series for 1952–53 and 1953–54 (and for the 1951–52 figures shown in brackets) varies from those for earlier years in that more commodities have been included, and more complete allowance made for quantities used for seed or animal feeding. Source: FAO, The State of Food and Agriculture, 1953, pt. I, Review and Outlook, p. 15; and FAO, The State of Food and Agriculture, 1954, Review and Outlook, p. 19.

[5] Estimated agricultural production (food only) if official objectives and estimates are realized. Source: The State of Food and Agriculture, 1953, pt. II, Longer Term Prospect: FAO, Rome, January 1954, pp. 15–21.

[6] North, western, and southern Europe only.

[7] China excluded.

[8] Eastern Europe and China as well as U. S. S. R. excluded.

[9] Including estimates for U. S. S. R., eastern Europe, and China.

[10] Data relate to planned agricultural production, food only, as assembled by ECE, Geneva, from official Soviet Union estimates. The 1952–53 figure is indicated as "provisional"; the estimated figure (176) is for 1955, not 1956–57. Most American students of Soviet agriculture judge these data to be highly exaggerated though official. According to official Soviet data (quoted by Nancy Nimitz in Statistics of Soviet Agriculture, RM–1250, May 1954, p. 2) gross agricultural output (expressed in rubles) in 1952 was below the 1950 plan and only slightly above the 1949 actual output.

Source: The State of Food and Agriculture, 1953, pt. II, Longer Term Prospects, FAO, Rome, January 1954, p. 19.

TABLE 19.—*Indexes of agricultural production in OEEC countries* [1]

Period	Total net output for human consumption	Total net output of livestock products
Prewar	100	100
1947–48	86	80
1948–49	97	88
1949–50	106	103
1950–51	114	110
1951–52	117	113
1952–53	122	118
1953–54 (preliminary)	129	123

[1] Austria, Belgium-Luxembourg, Denmark, France, Western Germany, Greece, Ireland, Italy, Netherlands, Norway, Sweden, Switzerland, Turkey, United Kingdom.

Source: OEEC.

The variation in rapidity of recovery in agricultural production among the countries of independent Europe is shown in table 20. In part this is related to the absolute level from which recovery began. Turkey, included for comparison, in particular has made a most remarkable showing whereas Austria, Ireland, Spain, Yugoslavia, and Switzerland have lagged. Greece, Italy, the United Kingdom, and Portugal have been outstanding. By and large, the degree and rate of recovery would appear to be most gratifying.

Difficulties can and do arise to interrupt what appears to be an upward trend. Witness the 1954 drought in Turkey and the exceptionally wet harvesting season in Western Europe of the late summer of 1954. Reports are unfavorable and quality of the cereals in particular may be damaged. Some foodstuffs may be declassed to become animal feed. But the sealanes are open and famine is nowhere in sight in independent Europe.

Problems, of course, remain, some of which are highly significant to any projection of the growth trends and are discussed in later pages. Problems of organization do exist and comprehensive reforms have been initiated in some areas. But overall, neither problems of organization nor of technology are of major moment in most of independent Europe. Per acre yields, for instance, are among the highest in the world. Livestock aspects of the economy are generally well developed. Cooperatives, both marketing and purchasing, are particularly well developed. The farmers, most of them landowners, are not only productive but enjoy a high standard of living as compared with those in captive Europe, the Soviet Union or most other parts of the world. Autarchy has revived, as after most wars, but trade in agricultural products continues on a major scale. Though independent Europe is, and will continue to be, a food and feed deficit area, it might be argued that the domestic agricultural situation, present and prospective, is of less vital strategic significance than in the eastern area. That is, with the New World faced, probably, with a continuing surplus of several important foods, as long as sealanes remain open any needed agricultural supplies would be available if terms can be arranged. Agriculture in independent Europe, owing to present technology, appears to be nearer its practical ceiling of production than East Europe or the Soviet Union. That is, the present yield level in some major areas raises questions of approaching biological limits and economic diminishing returns. Though some problems of production do exist

and are of importance, they are overshadowed by the relation of the agricultural sector to the rest of the economy and the relation of domestic agriculture to foreign production.

TABLE 20.—*Indexes of agricultural production, by countries, prewar to 1953–54*

[Gross output—Total and selected countries—Prewar (1934-38) average=100]

Country	Prewar	1947–48	1948–49	1949–50	1950–51	1951–52	1952–53	1953–54
Austria	100	66	72	80	92	97	101	103
Belgium	100	83	92	103	108	107	112	114
Denmark	100	84	94	108	116	112	118	122
France	100	84	100	101	109	104	110	114
Germany (Federal Republic)	100	73	84	97	108	112	116	118
Greece	100	85	82	106	92	107	99	128
Ireland	100	84	90	98	97	97	101	105
Italy	100	92	98	108	108	118	119	124
Netherlands	100	73	91	108	113	112	119	119
Norway	100	94	102	110	116	115	116	115
Portugal	100	111	103	107	114	128	112	135
Sweden	100	104	112	120	121	116	120	121
Switzerland	100	90	99	100	110	105	113	109
Turkey	100	100	121	109	122	148	158	170
United Kingdom	100	94	108	111	119	120	123	127
Total OEEC countries [1]	100	86	97	104	110	114	117	122
Spain	100	97	84	88	90	116	108	104
Yugoslavia	100	(2)	(2)	(2)	84	106	87	103

[1] Excludes Luxembourg and Iceland.
[2] Not available.

Source: Foreign Operations Administration, European Regional Data Book F-9, July 15, 1954.

(*b*) *Eastern Europe*

Eastern Europe's recovery in agriculture continues slowly with per capita production below prewar. East of the Iron Curtain the factors operating and the trends developing have indeed belonged to another constellation. Formerly a moderate food surplus area with a preponderance of the population engaged in agriculture, the agricultural sector of these economies has been demoted to a secondary position in accordance with an ideology which values industrial development, particularly of heavy industry, much more favorably, politically, economically, and strategically. Labor has been drained away to industry; the land has been "reformed"; the more efficient producers of the past have been discriminated against or eliminated; incentives to increase production and inducements to invest in agriculture have been discouraged by taxes and required deliveries. Down-to-earth planning appears to have been inadequate or neglected. Some sectors, for example livestock, continue to show particular weakness.

Data assembled from official sources by the ECE suggest an annual expansion of about 5 percent in agricultural production in Eastern Europe after 1948. However, it is admitted that this statistic is of limited significance because it covers only the main period of postwar recovery and is also complicated by the Danube Basin drought which resulted in serious food shortages in 1952–53. The effect of the low levels of current production is mitigated by the loss of population through war and emigration, and even by 1956–57 the population is expected to be little greater than before the war.[46] There may also be some mitigation by lesser export, certainly there has been a sharp

[46] FAO, The State of Food and Agriculture, 1953, pt. II, Longer Term Prospects, Rome, January 1954, pp. 19–20.

reduction to Western Europe but the exact status of export to the Soviet Union is less certain.[47]

(*c*) *The Soviet Union*

It should be particularly noted that information available to the Food and Agricultural Organization was so scarce that the Soviet Union was not included in the indexes shown in table 18 until the revised indexes were computed for 1951–52 and 1952–53 and then only along with some other areas as an estimated factor in the world total. However, statements of Soviet officials are that the index of gross agricultural output of the Soviet Union in 1949 was 6 percent above 1940, in 1950 was 14 percent above 1940, but in 1952 was only 10 percent above 1940.[48] Even these increases are thought by some to be rather heavily weighted with increases attained in industrial rather than food crops.

One student of Russian agriculture reacted to the effect that his earlier estimate (that gross agricultural output in 1950 was 5 percent lower than in 1940) may have been an underestimate of the deficiency. He reasoned that the Khrushchev statement, to the effect that 1952 gross farm output exceeded that of 1940 by 10 percent, was likely to have been based on procurement prices which greatly favor the 1952 output relative to that of 1940.[49]

It does appear that over past years, unlike their program and progress in heavy industry, the Soviet Union has had to "run hard" for slight gains in agricultural production. Planned development for more than a decade, involving a veritable rural revolution, gave them, in prewar 1940, a gross agricultural production about 15 percent above the unsatisfactory 1927–28 level. Practically no agricultural goal established under the postwar fourth 5-year plan (1946–50) was attained by 1950 and in this case, unlike the situation in the Western area, additional agricultural production would appear to be absolutely vital to further development of the overall program of the Soviet Union as we understand it. One authority states "* * * in any event, agricultural production is the tightest bottleneck for Soviet economic expansion and one that may become an important obstacle to further rapid industrialization of the Soviet Union." [50]

Because the Malenkov speech to the August 1953 session of the Supreme Soviet and the decrees subsequently published were supported with a major publicity effort they have been interpreted by some observers as indicating a major reorientation of policy as regards some parts of Soviet agriculture.[51] To be sure, the attempted repair

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[47] The situation as to food production in Eastern Europe in the current year, largely the result of neglect and disorganization as well as discrimination, is aggravated by weather problems. Not only the floods of midsummer in the Danube Basin but a wet harvest period for cereals appears to have contributed to existing difficulties. Yugoslavia decreed an increase in bread prices of as much as 20 percent and was reported as desperately in need of wheat, some of which they were attempting to get from the U. S. S. R. (New York Times, Sept. 7, 1954, p. 11.) The situation may have been equally troublesome among some of the captives in view of more general reports from that area. (New York Times, Sept. 7, 1954, p. 4.) Poland was reported as interested in Canadian rye and Argentine wheat, the Soviet Union in butter from the United States.

[48] Hoeffding, Oleg., The New Soviet Plans for Agriculture and Consumption. Santa Monica, The Rand Corp. RM–1173, December 23, 1953.

[49] Jasny, Naum, Prospects for Soviet Farm Output and Labor, The Review of Economics and Statistics, vol. XXXVI, No. 2, May 1954, footnote 6, p. 213.

[50] Timoshenko, V. P., New Soviet Economic Plan: Its Agricultural Aspect, Journal of Political Economy, vol. LXI, No. 6, December 1953, pp. 489–490.

[51] Others call attention to the main emphasis continuing to be centered, as in the previous era, on agrarian supercollectivism and party domination. Hence, the new program may be only another panacea to mask the inefficiency of collective farming.

of previous neglect of agriculture appeared to have as its goal abundance of food for the population and of raw materials for light industry within the next 2 or 3 years, a goal which appeared to be related not so much to a basic reorientation as to an attempt at the patching up of difficulties which may have developed in other parts of the economy. Nevertheless, large and specific commitments with respect to rapid improvement of urban food supplies are involved, with emphasis on livestock products.

This renewed livestock emphasis raises some troublesome problems, not of recent origin. In the spring of 1949, 2 years before the end of the fourth 5-year plan, the Government announced a new 3-year plan (1949–51) for development of livestock. Its statistics then revealed an enormous reduction in the numbers of livestock held individually by members of collective farms, thus showing that the drive to increase the numbers of livestock in collectivized herds was proceeding mostly or wholly at the expense of livestock individually held.[52] This was later confirmed by the statements of Khrushchev and Malenkov. In particular, the unresolved problem would seem to be how, until feedstuffs have been significantly increased, herd size can be rapidly expanded and, during the same period, deliveries of meat, fats, milk and other animal raw materials be greatly expanded. State procurement may, of course, be increased by requiring more of the slaughter to be delivered. Imports of meat also have been sharply increased. The shift ordered in reporting date from January 1 back to October (before autumn slaughter) would give an increase in herd size the first year—but increased slaughter and expansion of successful breeding during the same period would appear, biologically, to be mutually exclusive.

Foreign students of Soviet agriculture have disagreed as to the likelihood of success of the new agricultural program particularly as to whether it can be done in the announced time.[53] Jasny holds that "net farm output per capita of total population may possibly increase, perhaps by as much as 15 percent or even 20 percent" over the 7 years up to and including 1960.[54] This, then, is a probable net increase estimated at an average of less than 3 percent, as against an average rise of 8.5 to 9 percent per year scheduled under the fifth Five Year Plan for 1950–55. But he thinks that if the Government takes seriously its promises to accomplish its goals in the stated time, it is due to be disappointed. His figures would appear to show relatively large accretions of new labor available through 1957.

Thus as matters stand at present there are only a few things of which we can be perfectly certain regarding the agricultural production program in the Soviet Union. The first is that it has received much publicity inside the country, with some aspects spelled out in great detail. The second is that it has received much attention outside the Soviet Union—it has resulted in much discussion abroad. Many articles and studies have been prepared by students of Soviet agriculture and others. The third is that we can be sure we do not fully understand it with certainty, either as to all its reasons and purposes, inter-

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[52] See especially V. P. Timoshenko, Foreign Affairs, January 1954, p. 248.

[53] For a well-rounded discussion see Volin, Lazar, The Malenkov-Khrushchev New Economic Policy. Journal of Political Economy, Vol. LXII, No. 3, June 1954, pp. 187–209.

[54] Jasny, Naum, Prospects for Soviet Farm Output and Labor, The Review of Economics and Statistics, vol. XXXVI, No. 2, May 1954.

nal and external, its proposed rate of progression and timing, and especially as to its seeming biological inconsistencies. However, it cannot easily be written off as a huge hoax, a gigantic propaganda effort nor as a prize example of self-delusion. It may be a desperate economic effort of the new regime to recoup in a long neglected and increasingly vulnerable sector of the economy, a shrewd political move toward creating better relations with the agricultural folk, toward keeping the urban industrial folk better satisfied by means of a more abundant and wider choice of food and consumer goods. This test can be won only if agriculture performs more adequately and such performance would of necessity involve some diversion of resources from some other sector of the economy to agriculture. Perhaps time will clarify.

And what has time told, at this early date?

In June 1954 it was announced [55] that the spring-sown acreage exceeded that of 1953 by 23,500,000 acres with spring grains accounting for about two-thirds of the increase, spring wheat alone amounting to about one-third of the total. Expansion in the eastern regions was reported as exceeding the official goal of 5,700,000 acres. For various reasons, replanting of winter damaged crops, replacement of low-yielding grasses and expansion in less productive areas, not all of the indicated expansion is considered to be a net addition to the total crop acreage for harvest. Nevertheless, an acreage was indicated in substantial excess of the total sown area for the 1953 harvest, 388 million acres.

But by the late summer of 1954 it appeared that the Soviet Union crop harvest of the year would not be a bumper one. Weather, particularly a long winter which delayed sowings by a month, was indicated as largely responsible together with drought in some important areas.[56]

Nevertheless the drive for land reclamation was reported ahead of schedule with the goal of 13 million hectares [57] of virgin land in Kazakhstan and Siberia already plowed, for sowing in 1955, with 2 million additional to be immediately added for next year and a new goal of 13 million more hectares to be prepared for sowing in 1956. Some 150,000 people had been moved into the new areas along with 90,000 tractors (in 15-horsepower units). Buildings and transport were reported to lag, but more people were to be sent and the evolution of the program suggested a shift from an emergency, short-term goal to a longer one.

Meanwhile certain food shortages in the Soviet Union were reported to have reached serious proportions in spite of remedial attempts initiated in 1953. The potato crop was reported as lagging badly, grain barely up to 1953 and meat shorter than a year ago. New moves in the official orbit were to set vegetable prices higher in all state stores except during the harvest period, September 20 through November 1, to increase compulsory work on state and collective farms and to double the goal for new land to be made agricultural (Business Week, August 21, 1954, p. 108).

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[55] Reported and discussed in Foreign Crops and Markets, vol. 69, No. 4, July 26, 1954, pp. 92–93.
[56] Economist (London), August 21, 1954, pp. 591–592.
[57] One hectare equals approximately 2.47 acres.

There was some confirmation in trade sources of a difficult harvest and food shortages in inquiries made or negotiations opened by the Soviet Union and Poland for Canadian rye. Also in the purchase by the Soviet Union of some Canadian wheat and 1 million bushels of barley.

2. AGRICULTURAL RESOURCES: STATUS AND TRENDS

(*a*) *Land*

Land is a major factor of production on which considerable information is available and which might provide some indication of future development. Total territory tends to remain constant, except as there have been boundary shifts as a result of the war. However, such gross information is shown in table 21 primarily to convey the concept of the size of Western Europe in relation to the area east of the Iron Curtain.

In total territory the Soviet Union with a postwar area of 2,227 million hectares is immensely larger than the 493 million total for all Europe (excluding the Soviet Union) and about 10 times the size of Western Europe. Moreover, the Soviet Union area is not much less than the total of 2,418 million hectares for all of North and Central America. Continental United States is only 782,783,000 hectares.

But in many vitally significant ways gross territory may not be agricultural resources, present or potential. Agricultural areas, including both arable land and permanent meadows and pastures, of the Soviet Union are indicated as 349 million hectares, or about 15 percent of its total territory.[58] Western and captive Europe includes less than 250 million hectares of agricultural area, or approximately half its total territory. The United States, on the other hand, encompasses some 452 million hectares of agricultural area, or nearly three-fifths of its total territory.

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[58] FAO, Yearbook of Food and Agricultural Statistics, I, Production, 1949, p. 13.

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TABLE 21.—*Agricultural resources: Land*

	Total territory, thousand hectares		Total agricultural [1] area, thousand hectares		Total arable [2] area, thousand hectares	
	Prewar	Postwar	Prewar	Postwar	Prewar	Postwar
Western Europe:						
Austria	8,387	8,387	4,353	4,177	1,972	1,756
Belgium	3,050	3,050	1,833	1,795	1,044	944
Denmark	4,293	4,293	3,090	3,087	2,674	2,674
France	55,100	55,100	34,535	32,913	20,732	18,509
West Germany [3]	24,529	24,529	14,575	14,203	8,492	7,992
Ireland	6,890	6,890	4,713	4,688	1,456	1,575
Netherlands	3,299	3,386	2,409	2,459	983	1,039
Norway	30,896	30,890	1,046	1,069	849	856
Sweden	41,035	41,035	4,865	4,621	3,742	3,727
Switzerland		3,999		2,189		489
United Kingdom	24,176	24,176	19,563	19,518	5,118	7,285
Total		205,729		90,719		46,846
Mediterranean Europe:						
Greece		13,600		8,482		3,389
Italy	30,870	29,376	21,111	20,488	13,004	13,031
Portugal	8,862	8,862		3,380		(4)
Spain		50,276		42,062		18,600
Total, Mediterranean Europe		101,514		44,412		[4] 35,020
Total, western and Mediterranean Europe		307,243		165,131		81,866
Eastern Europe:						
Bulgaria	10,314	11,084	4,560	4,537	4,082	3,971
Czechoslovakia	14,050	12,783	8,355	7,444	5,854	5,144
East Germany	22,548					
Hungary	9,295	9,295	7,560	7,320	5,611	5,466
Poland [3]	38,864	31,173	20,864	18,179	16,479	14,363
Rumania		23,738		12,700		9,300
Total		88,073		50,180		38,244
Other Europe:						
Finland	34,848	30,545	3,454	3,307	2,607	2,455
Yugoslavia	24,850	25,688	14,438	13,849	7,552	7,366
Total	59,698	56,233	17,892	17,256	10,159	9,821
Soviet Union	2,138,200	2,277,000	323,000	349,000	205,000	225,000
United States of America		771,061		452,915		177,178

[1] Agricultural area includes arable land plus permanent meadows and pastures. Forests and woodlands are excluded as are some unused but potentially productive areas, some built-on area, wasteland, etc.

[2] Arable area includes fallow and orchards.

[3] For Poland and West Germany the data for prewar are shown on present boundaries.

[4] Portugal arable land not separated from agricultural land figure.

Source: Largely from Economic Bulletin for Europe, Economic Commission for Europe, vol. 3, No. 2, October 1951, pp. 22–23.

Partly from FAO Yearbook of Food and Agricultural Statistics, Part I Production 1949. Washington, 1950, pp. 13–17

Although there is no acceptable standard measure of the quality of "agricultural" land which permits adequate comparison from area to area, it is generally assumed that *arable* land, rather than permanent meadows and pastures, is more likely to be an indicator of agricultural strength. The Soviet Union is believed to have 225 million to 250 million hectares of arable land (including fallow and orchards) whereas all the rest of Europe, excluding European Russia, had less than 150 million, and the United States had about 177 million hectares classed in that generally cropable category. Western and Mediterranean Europe has more than 80 million, captive Europe fewer than 40 million hectares of arable land. Territory in Western and Mediterranean Europe is not likely soon to be shifted in any major degree from one category to another, i. e., arable land has been and will very largely continue as arable, to be added to by drainage, clearing, etc., only in slight degree and slowly.

The rather "frozen" status of land resources of independent Europe is not quite so true of Eastern Europe. Peseli estimates that in almost all Eastern European countries (excepting Bulgaria) there are in total several million hectares of unproductive and uncultivated land which through modern drainage projects or irrigation could be made into arable soil. He indicates something like 2 million such hectares in Yugoslavia and nearly 1,700,000 hectares in old Poland, now Soviet territory. In all he estimates that about 1,500,000 peasant families could be accommodated, assuming 5 members per family and allowing 1 hectare per member. That would provide a substantial expansion in employment for a sizable part of the underemployed population of the entire area, estimated by some as high as 20 million to 25 million. He further indicates that all the plans of the present regimes anticipate some such improvement; Yugoslavia 800,000 hectares, Hungary 115,000 hectares, Albania 124,000 hectares, and Rumania 300,000 hectares.[59] But it is in the realm of the Soviet that the expansibility of arable area really becomes an important question in relation to extrapolating agricultural trends.

The Soviet Union is the world's largest territorially continuous national unit. Its 8,500,000 square miles of area is roughly one-sixth of the ice-free land surface of the earth and about as large as the continent of North America. At first glance such a vast expanse of land would give the impression of providing enormous agricultural potential.

Many of the Soviet people, now numbering something over 200 million, live in the so-called fertile triangle, an area of about 1 million square miles with the corners at Leningrad, Odessa, and Irkutsk. The land of the triangle, including the fine dark chernozem soils, is now largely occupied though not all of it is arable. Unfavorable climate and soil rather than topography provide much of the explanation for the general low agricultural utility, present and perhaps permanent, of much of the area outside the triangle. Too-cold and too-dry are the key understandings. And though there is some pushing out on both the dry margin and the cold margin, expansion becomes more and more precarious and less and less productive.

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[59] Peseli, Branko M., The Industrialization of Peasant Europe, National Committee for a Free Europe, Inc., New York, 1953, pp. 33–35.

Timoshenko[60] finds that about 30 percent of the territory of the Soviet Union is so cold or so dry that it must be regarded as completely barred from agricultural use. In that category he includes 312 million hectares of tundra and forest-tundra, 90 million hectares of semidesert, and 210 million acres of desert, mostly in central Asia. In addition, he finds, largely from a land inventory by L. I. Prasolov, that about 29 percent of the area which has what may be called an agricultural climate is so extremely deficient in soil quality as to be unusable. Thus about 55 percent of the total area was judged to be completely excluded from agricultural occupation with the agricultural techniques which now prevail.

Continuing, he finds that forest occupies nearly 29 percent of the total, leaving for agricultural use (arable land, meadows, and pastures) less than one-sixth of the entire territory. However, the picture presented by Prasolov was to the effect that about 80 million hectares might, within a reasonable time, be added to the cropped area, an increase of some 40 percent above the prewar level. Approximately half of the expansion would be in the forest zone, one-fourth in the dry steppe. It is into these areas that the very recent and planned Soviet agricultural expansion apparently has largely gone, particularly the dry steppe. Even such expansion on the extensive margin cannot, according to the experts, solve the overall Soviet agricultural problem. Colin Clark finds that after corrections for differences in soil quality and less favorable climate that the Soviet Union has only about 70 percent as much "standard farmland" as the United States.[61]

(*b*) *Population*

Population is discussed in detail elsewhere; hence only a few words are included here. In both eastern and southern Europe, as well as in the Soviet Union agricultural production occupies fully half the active male population (table 22). In northwestern Europe, on the other hand, less than one-fifth are so engaged. In the United States less than one-sixth of its population is engaged in agriculture. Information on women engaged in agriculture is inadequate but large numbers are known to be so employed, particularly in the Soviet bloc. Some of the more serious problems of eastern Europe and the Soviet Union are related to the fact that even with fully half of the population engaged in such production, yields and labor efficiency are so low in agriculture that the food surplus produced is not enough to provide the nonagricultural population with abundant food. Meanwhile living standards make slow progress among the rural population. Though that population constitutes a large reservoir of possible industrial labor, its availability for nonagricultural use is at least slowed up by inability to produce the agricultural abundance needed by other parts of the economy. The prewar productivity of the average Russian farm worker has been estimated as low as one-fifth that of the United States farm worker.[62]

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[60] Timoshenko, V. P., Agricultural Resources, in Soviet Economic Growth, edited by Abram Bergson, pp. 250–251, Row, Peterson & Co., Evanston, Ill.

[61] Clark, Colin, Review of Economic Progress, Brisbane, Australia, I. Nos. 6 and 7, June and July 1949.

[62] Jasny, Naum, The Socialized Agriculture of the U. S. S. R., Palo Alto, Stanford University Press (1949), p. 442.

TABLE 22.—*Males in agriculture and in other occupations, 1930 and 1950, by regions*

Region	In agriculture (millions)		In other occupations (millions)		Active males in agriculture as percentage of total active males	
	1930	1950	1930	1950	1930	1950
Northwestern Europe	14	12	47	53	23	19
Southern Europe	20	21	14	19	59	52
Eastern Europe	12	11	10	11	53	51
Soviet Union	28	29	20	26	58	53
United States	10	7	28	36	26	16

Source: FAO, European Agriculture—A Statement of Problems. Geneva 1954, p. 1, table 2.

The indigenous population to be served by the agricultural production, together with anticipated near term growth, is shown in table 23. With the exception of the Soviet Union recent and estimated rates of growth (table 24) are among the lowest in the world.

TABLE 23.—*Population by regions, 1934–38 to 1956–57 (estimated)*

[Millions]

Years	Northwestern and Southern Europe	Eastern Europe	Soviet Union
1934–38	275.4	94	188
1948–50	301.5	90	200
1952–53	308.4	92	210
1956–57	317.0	95	225
Indexes (1934–38=100):			
1948–50	110.0	95	106
1952–53	112.0	97	112
1956–57	115.0	101	120

Source: Arranged from material in FAO, State of Food and Agriculture 1953, pt. II—Longer Term Prospects, Rome, January 1954, p. 14.

TABLE 24.—*Estimated annual percentage increase of population, by regions, 1928–33 to 1957 (estimated)*

Regions	1928–33	1933–38	1938–48	1948–51	Assumed 1952–53, 1956–57
Northwestern and southern Europe	0.7	0.7	0.7	0.8	0.7
Eastern Europe	1.0	.8	—.7	.8	.8
Soviet Union	1.2	1.2	----------	1.6	1.6
North America	1.0	.7	1.2	1.8	1.5

Source: FAO, The State of Food and Agriculture 1953, Part II—Longer Term Prospects, Rome, January 1951, p. 13.

(*c*) *Capital*

Information on trends in capital invested in agriculture is slight indeed. Budgeted governmental expenditures appear to have been increased in the countries of the Eastern bloc for 1954 by as much as 60 percent compared with the low level of the previous year indicating, apparently, a new emphasis.

3. LAND UTILIZATION

Changes in the utilization of agricultural land vary in direction and degree from country to country and by major divisions (tables 25 and 26). In the West most of the changes have been a result of shifts within the already established pattern—for example, the breaking up of permanent grass in the United Kingdom to grow grain, potatoes, and rotation grass. In the more easterly areas it has been possible to expand moderately the land classed as agricultural and so affect utilization from another angle.

TABLE 25.—*Land utilization, 1938, in countries in Europe*

[Percentages]

Country	Area under						
	Permanent grass as percentage of agricultural area	Arable land as percentage of agricultural area	Grains as percentage of arable land area	Rotation meadow and other feed crops as percentage of arable land area	Potatoes and vegetables as percentage of arable land area	Industrial crops as percentage of arable land area	Fallow as percentage of arable land area
Western Europe:							
Austria	52	45	58	26	12	2	1
Belgium	39	58	56	21	15	9	----------
Denmark	13	86	51	42	3	1	1
France	34	60	50	29	11	2	8
Germany	28	63	59	18	16	3	2
Ireland	69	31	26	63	10	2	----------
Netherlands	56	41	57	11	19	11	----------
Norway	18	82	22	69	7	----------	1
Sweden	22	77	41	47	4	1	6
Switzerland	76	23	24	64	10	1	----------
United Kingdom	73	26	43	43	8	3	3
Total	42	54	51	29	12	3	5
Mediterranean Europe:							
Greece	43	46	60	3	6	6	25
Italy	28	62	53	19	11	2	15
Portugal	31	51	53	----------	11	----------	----------
Spain	50	40	53	6	9	1	32
Total	41	48	54	11	10	2	24
Captive Europe:							
Bulgaria	7	90	68	6	5	9	11
Czechoslovakia	28	70	59	20	14	4	1
Hungary	21	74	73	15	7	2	2
Poland	25	73	63	10	17	2	6
Rumania	24	73	84	5	4	4	4
Other Europe:							
Finland	24	76	37	52	4	----------	6
Yugoslavia	43	52	82	5	6	2	5
Total for captive and and other Europe	27	70	70	11	10	3	5
Total, all Europe except Soviet Union and Baltic States	37	57	59	18	10	3	9

Source: United Nations, Economic Bulletin for Europe, second quarter 1951, vol. 3, No. 2, p. 20.

TABLE 26.—*Changes in land utilization since before the war,[1] Europe and the Soviet Union*

[Index base: 1952[2]=100]

Country	Grain	Potatoes and fodder roots	Industrial[3] crops	Temporary[4] grass	Permanent[5] grass	Vineyards and orchards
Western Europe:						
Austria	135	112	91	82	100	147
Belgium	117	142	83	124	88	128
Denmark	107	91	38	94	127	30
France	120	129	56	82	91	93
Western Germany	109	102	87	98	102	91
Ireland	84	109	85	95	107	.....
Netherlands	112	72	56	86	100	102
Norway	112	96	.....	101	87	100
Sweden	113	115	20	98	116	48
Switzerland	82	86	44	81	112	77
United Kingdom	66	90	83	69	144	92
Mediterranean Europe:						
Greece	93	55	77	.....	106	95
Italy	108	104	89	101	100	93
Portugal	71	35	.....	.....	.....	.....
Spain	113	112	92	94	97	98
Captive Europe:						
Bulgaria	108	.....	67	.....	.....	83
Czechoslovakia	111	127	77	86	99	67
Eastern Germany	111	98	67	137	106	91
Hungary	107	100	26	109	104	100
Poland	105	111	65	128	100	100
Rumania	.....	.....	.....	.....	.....	.....
Other Europe:						
Finland	97	86	.....	98	100	.....
Yugoslavia	116	126	59	62	101	85
Soviet Union[6]	103	[7] 100	92	[8] 70	.....	.....

[1] Prewar is 1938 or the nearest year for which figures are available.
[2] Base year is 1952 or the most recent year for which data are available; and prewar area data have been divided by postwar data, hence an index figure above 100 indicates a decline as compared with the earlier situation.
[3] Includes sugar beet.
[4] Includes miscellaneous fodder.
[5] Rough grazing has been excluded.
[6] Based on post-World War II boundaries.
[7] Potatoes and vegetables.
[8] Temporary grass and other feed crops.

Sources: Arranged from FAO, European Agriculture, A Statement of Problems, Geneva, 1954, table 7, p. 13, except for U. S. S. R. data which are computed from data on p. 64 of same. Reference is to present territorial areas with the exception of Finland, Poland, and Italy, for which computations at source were based on methods of linkage.

It appears that independent Europe, with some notable exceptions, is now less of a grain-growing area than prewar. The exceptions are the United Kingdom with a much expanded grain acreage, as well as Ireland, Switzerland, Portugal, and Greece. Eastern Europe, also, seems to have reduced grain in favor particularly of industrial crops. For potatoes and fodder roots the trend appears to differ markedly from country to country with no clear relation to West versus East. In Czechoslovakia, Yugoslavia, and Poland it appears that there have been substantial declines in fodder root acreage as compared with prewar, as also in Belgium and France. Industrial crops, including sugar beets, have been expanded in many areas since the war, particularly in Eastern Germany and Sweden. Temporary or rotation grass also has been generally expanded, with notable exceptions in Belgium, Hungary, and Eastern Germany. With two outstanding exceptions, Austria and Belgium, vineyards and orchards appear to have been generally expanded, definitely so in Denmark and Sweden. In the Soviet Union, temporary grass and other feed crops seem to have received considerably more emphasis in the postwar period, but

beginning with 1954, some acreage expansion under grains was to be at the expense of grasses.

Crop and livestock production and utilization

One way of judging agricultural trends is to compare the changes in particular products as to production, yield, and utilization. This can be done, of course, only on a very selective basis within the space available.

Table 27 suggests that in northwestern and southern Europe a good many crops now exceed their prewar status, some remarkably so, though others lag badly, notably rye, oats, hemp, raisins, and the pulses. Similar data are not available for Eastern Europe.

Some trends in yield data are shown in table 28 for Eastern as well as other parts of Europe. Those data indicate that the general trend of yields per hectare and per cow has been upward in Western Europe since the war. Mediterranean and Eastern Europe, at a lower level, have had comparatively little success in boosting the yield of either of two important grains or milk.

TABLE 27.—*Northwestern and southern Europe; estimated agricultural production 1956–57 if current plans and estimates are realized*

Commodity	Total production					Indexes (1934–38=100)		
	1934–38 average	1948–50 average	1951–52	1952–53 (prov.)	1956–57 (est.)	1948–50 average	1952–53 (prov.)	1956–57 (est.)
	Million metric tons					Indexes		
Wheat	30.7	29.3	30.1	32.4	33.3	95	106	108
Rye	7.5	6.7	6.4	6.7	7.4	89	89	99
Total bread grains	38.2	35.9	36.5	39.1	40.7	94	102	107
Rice (milled)	.7	.7	.9	1.0	1.0	95	132	132
Barley	9.1	9.8	11.8	12.8	12.0	108	141	132
Oats	16.4	14.6	15.4	15.0	17.8	89	92	109
Mixed grain	2.1	2.8	3.2	3.4	3.6	137	166	176
Maize	9.7	7.0	9.0	5.9	7.5	72	60	77
Total coarse grains	37.3	34.2	39.4	37.1	41.0	92	100	110
Total cereals	76.2	70.9	76.8	77.2	82.7	93	101	108
Potatoes	69.4	77.4	74.4	72.7	80.1	112	105	115
Pulses	2.3	1.9	2.3	2.0	2.2	81	84	94
Sugar (raw equivalent)	4.0	4.9	5.8	5.5	6.2	121	136	154
Vegetable oils and oilseeds (oil equivalent):								
Edible	.79	.77	1.58	.80	1.27	98	101	162
Total	.81	.83	1.62	.84	1.34	102	104	165
Citrus fruit	2.00	1.86	2.28	2.44	3.00	93	122	150
Bananas	.18	.23	.23	.23	.23	126	126	126
Raisins	.21	.12	.12	.12	.13	58	57	62
Figs (dried)	.23	.23	.23	.23	.23	100	100	100
Wine	14.08	12.55	13.28	13.34	13.60	89	95	97
Tobacco	.19	.24	.28	.21	.28	127	112	146
Hemp	.15	.14	.11	.10	.12	93	69	79
Flax	.08	.10	.13	.13	.14	118	154	160
Cotton (lint)	.02	.03	.04	.05	.04	136	204	204
Wool (clean basis)	.10	.10	.10	.10	.10	98	100	102
Milk	81.16	76.52	87.25	86.96	94.16	94	107	116
Meat [1]	8.77	7.19	8.68	8.71	9.46	82	99	108
Eggs	2.11	2.13	2.39	2.47	2.64	101	117	125
Population (millions)	275.4	301.5	305.8	308.4	317	110	112	115

[1] Beef and veal, pig meat, mutton and lamb.

Source: FAO, The State of Food and Agriculture 1953, Part II—Longer Term Prospects, Rome, 1954, p. 69.

TABLE 28.—*Some typical yields, Europe and the Soviet Union, 1934–38 and 1950–52*

Region	Yield of wheat (quintals per hectare)		Yield of barley (quintals per hectare)		Milk yield (thousand liters per cow per year)	
	1934–38	1950–52	1934–38	1950–52	1934–38	1950–52
Western Europe:						
Austria	17	19	18	—17	2.0	2.0
Belgium	27	33	26	32	3.2	3.6
Denmark	30	36	30	35	3.2	3.4
France	16	18	15	16	1.9	2.0
Western Germany [1]	22	27	21	26	2.5	2.7
Ireland	23	24	25	25	1.8	2.0
Netherlands	30	36	28	33	3.5	3.8
Norway	20	19	20	21	1.7	2.2
Sweden	24	20	21	23	2.4	2.9
Switzerland	24	27	19	25	2.8	3.0
United Kingdom	23	27	21	25	2.5	2.8
Mediterranean Europe:						
Greece	9	10	10	10	.7	.7
Italy	14	16	11	11	1.6	1.8
Portugal	10	8	6	8	[2] 7	
Spain	10	9	13	13	1.2	1.4
Eastern Europe:						
Bulgaria						
Czechoslovakia	17	[3] 19	17	[3] 16	1.9	1.5
Eastern Germany [1]	22	[4] 22	21	[4] 18	2.5	2.3
Hungary	14	[3] 13	13	[3] 14	1.8	1.6
Poland	15	[4] 12	16	[4] 12	1.5	1.7
Rumania						
Other Europe:						
Finland	18	15	15	16	2.0	2.3
Yugoslavia	11	11	10	9	1.4	1.0
Soviet Union	10.0		10.6		1.0	1.0

[1] Western and Eastern Germany data for 1934–38 is that of all Germany.
[2] 1940.
[3] 1948–51.
[4] 1948–50.

Source: Largely from United Nations; FAO, European Agriculture, A Statement of Problems, Geneva, 1954, p. 9.

TABLE 29.—*Livestock numbers in selected areas*

[Thousands]

Area	Cattle				Hogs				Sheep			
	Average 1936-40	Average 1946-50	1950	1953	Average 1936-40	Average 1946-50	1950	1953	Average 1936-40	Average 1946-50	1950	1953
Western Europe:												
Austria	2,600	2,173	2,203	2,460	2,849	1,558	1,927	2,850	316	419	375	350
Belgium	1,724	1,674	1,902	2,153	1,005	886	1,361	1,382	187	132	121	114
Denmark	3,108	2,881	2,886	2,953	2,997	2,033	3,120	3,906	147	93	61	40
France	15,504	15,067	15,404	16,280	7,034	5,714	6,747	7,179	9,648	7,257	7,480	7,674
West Germany	12,114	10,831	10,883	11,641	12,666	6,866	9,698	12,979	1,889	2,274	2,020	1,544
Ireland	4,021	4,093	4,322	4,399	978	543	645	879	3,076	2,229	2,385	2,929
Netherlands	2,693	2,471	2,723	2,930	1,725	1,187	1,795	2,259	636	459	390	424
Norway	1,390	1,226	1,237	1,150	393	321	422	379	1,742	1,716	1,812	1,985
Sweden	2,959	2,705	2,648	2,554	1,292	1,213	1,278	1,400	398	368	279	241
Switzerland	1,663	1,471	1,530	1,635	915	783	908	1,017	177	189	[1] 191	[2] 191
United Kingdom	8,798	9,973	10,620	10,452	4,386	2,309	2,986	5,176	26,112	19,032	20,430	22,429
Total, Western Europe	55,184	54,565	56,358	58,607	37,441	23,413	30,887	39,406	44,328	34,168	35,544	37,921
Mediterranean Europe:												
Greece	1,278	742	732	944	532	482	530	587	8,304	6,698	6,337	7,784
Italy	8,550	7,838	8,331	[3] 8,690	3,700	3,800	4,052	[3] 4,212	9,650	9,624	10,295	9,950
Portugal	905	975	930	930	1,206	1,200	[4] 1,200	[4] 1,200	3,890	[5] 3,890	[1] 5,000	5,000
Spain	3,739	3,950	[4] 3,950	[3] 4,200	4,944	5,122	[1] 5,970	6,300	20,000	22,500	[6] 24,921	[3] 26,200
Total, Mediterranean Europe	14,467	13,505	13,943	14,764	10,382	10,604	11,752	12,299	41,844	40,612	46,553	48,934
Total, Western and Mediterranean Europe	69,651	68,070	70,301	73,371	47,823	34,017	42,639	52,705	86,172	74,780	82,097	86,855
Captive Europe Total	26,000	20,200	21,800	23,300	26,000	16,100	21,400	22,300	26,100	21,400	24,000	25,300
Other Europe:												
Finland	1,850	1,598	1,783	1,809	485	350	446	----------	1,007	1,071	1,220	998
Yugoslavia	4,181	----------	----------	----------	3,238	----------	4,287	4,500	9,796	9,000	10,042	11,400
Soviet Union	59,800	50,800	56,000	56,600	32,300	13,000	19,000	28,500	66,000	67,700	78,000	92,000
United States	66,706	78,951	77,963	93,637	48,352	57,563	58,852	54,294	51,404	34,993	29,826	31,861
Canada	8,246	8,883	8,243	8,906	4,078	5,542	5,413	5,237	2,651	1,681	1,259	1,105

[1] 1951.
[2] Estimated as the same as 1950 average.
[3] 1952.
[4] Estimated as the same as 1946-50 average.
[5] Estimated as the same as 1936-40 average.
[6] 1949.

Source: Foreign Crops and Markets, U. S. Department of Agriculture; cattle, Apr. 12 1954, p. 296; hogs, Mar. 29, 1954, p. 264; sheep, Apr. 26, 1954, p. 368.

For the Soviet Union as late as 1949 crop yields were about one-tenth less than prewar.[63]

Information on livestock indicates in general a slower rate of recovery in the East than in the West.

So, too, very incomplete information available on how well the population has been and is eating suggests that trends in food consumption leave much to be desired. The stepping up of state procurements suggests an additional effort to keep urban populations working, i. e., the announced intended increase from 1952 to 1954 of meat procurement in the Soviet Union by 37 percent, of milk by 43 percent, of eggs by 63 percent.

Declines in exports of foodstuffs from Eastern Europe to Western Europe do not necessarily mean that the producers and indigenous population of the producing countries are consuming greater amounts. It should be noted the Soviet Union exports of a few such products make a stronger showing (table 30). During a recent period the Soviet has imported modest amounts of grains and fats and oils from the West. She has also become the second largest importer of meats.

TABLE 30.—*Imports of selected agricultural commodities into Western Europe from Eastern Europe, 1938, 1949, 1952*

[Thousands of tons]

Commodity	Soviet Union			Other Eastern European countries		
	1938	1949	1952	1938	1949	1952
Wheat and rye	795	564	1,037	1,612	741	181
Other cereals	478	323	799	1,534	654	566
Sugar	13	21	71	276	198	239
Meat	38	-------	-------	173	36	73
Eggs	8	-------	-------	84	17	26
Tobacco	-------	1	-------	27	10	7
Poultry	2	-------	-------	48	8	5
Butter	54	-------	-------	16	1	10

Source: United Nations—FAO, European Agriculture—A Statement of Problems, Geneva, 1954. Table 30, p. 68.

4. AGRICULTURAL ORGANIZATION

Europe remains overwhelmingly the world's largest importer. This is eminently the case in Western Europe, and especially so with regard to foodstuffs, of which European imports (very largely independent Europe) account for more than three-fifths of the world total and about nine-tenths of the interregional shipments. Yet for all of that, the peasant and the family farm are basic, except in the Soviet Union.

(*a*) *Independent Europe*

It has been well stated:

> * * * Broadly speaking, Western Europe has come to rely on overseas producers to supply it with large quantities of cereals and sugar, and, furthermore, has increased its dependence on overseas sources for textile fibers and vegetable oils. Apart from the United Kingdom, Western European countries have chosen at the same time to protect and maintain their agricultural structure composed of millions of small farmers, reserving for them virtually the whole of the market for animal products and most of that for vegetables and fruit.[64]

[63] Kershaw, Joseph A., Agricultural Output and Employment in Soviet Economic Growth, Abram Bergson (ed.). Row Peterson, Evanston, 1953, p. 305.

[64] United Nations—FAO, European Agriculture—A Statement of Problems, Geneva, 1954, p. 2.

Agriculture in much of independent Europe is confronted by three major organizational problems. The first is one of local organization, related primarily to reform for efficiency—the problem of lessening the existing high degree of farm fragmentation still prevailing in some areas of the Continent. The waste of the farmer's time in travel from his village to several or numerous small fields, each consisting of scattered strips or bits of land, puts severe limitations on the system. It also restricts the likelihood of making much use of modern machinery. The problem is a major one in some countries, though considerable progress has been made (table 31).

The second major problem confronting agriculture in free Europe is the degree of autarchy favored by some of the governments. In some instances this appears to shelter uneconomic production and to decrease the incentive for self-help and efficiency which might otherwise eventually achieve a stronger, more efficient agriculture.

TABLE 31.—*Land fragmentation and estimated area in need of consolidation, Europe*

Country	Year of census	Average size of plots	Average number of plots per farm	Estimated area in need of consolidation [1]	
		Hectares		Thousands of hectares	As percent of total agricultural area
United Kingdom					
Ireland					
Norway					
Denmark				150	5
Sweden				250	5
Finland	1938	4.5	2.6	300	10
Poland				4,000	20
Greece				850	25
Belgium	1950	[2] .95	[2] 6.3	500	28
France	1901	[3] .85	[3] 18.0	9,000	30
Northeast		(.6)			
Southwest		(3.0)			
Switzerland	1939	.5	9.7	450	38
Austria				1,000	40
Italy	1935	.6	10.6	6,500	40
Bulgaria	1934	.4	13.4	1,900	40
Netherlands	1950	2.3	3.2	1,000	43
Western Germany	1949	.7	10.0	6,000	50
Spain	1945	1.6	[4] 7.0	12,000	50
South		3.0	4.1		
Central		.7	13.2		
Rumania	1948	1.1	6.6	7,000	50
Czechoslovakia	1938	.3	30.0	3,500	50
Hungary	1935	1.4	3.4	3,500	50
Portugal	1940	.6	25.9	2,800	60
Yugoslavia				7,000	70

[1] The estimates for the Netherlands, Belgium, France, Germany, and Switzerland are derived from official sources. The French estimate is known to represent a minimum of actual needs, whereas the Dutch estimate seems to be a maximum. The German figure seems to underestimate the problem somewhat. The estimates for other countries are necessarily less precise; the basis of reckoning is somewhere between those of France and the Netherlands.

[2] Units under 1 hectare are not considered, because they are exceptionally numerous, and are mainly small gardens for spare-time work; if they were included, the figures for Belgium would be 0.8 and 2.2, respectively.

[3] The figures refer to "lots de propriété"; for "parcelles cadastrales" the figures would be 0.35 and 35.0, respectively.

[4] Figures refer only to south and central Spain; if the north were surveyed, the average size of plots would be smaller and the number of plots per farm greater.

Source: United Nations—FAO, European Agriculture—A Statement of Problems, Geneva, 1954, p. 20.

Third is the matter of arranging for the advantages of an enlarged market area. Representatives from 17 European countries, after much consideration of the "green pool" idea for integration of the agricultural markets of western European countries, gave up the idea of an independent institution somewhat like the Coal and Steel Community. The idea involved the removal or relaxation of restrictions on the movement and sale of agricultural products as among the several countries. Instead, the OEEC was asked to establish a ministerial committee on food and agriculture which would be headed by a director responsible to the Secretary-General of OEEC and would meet at least twice a year to examine agricultural problems.[65]

(*b*) *Eastern Europe*

As a generalization, agriculture in Eastern Europe prior to World War II was based on a peasant economy. That economy had been strengthened after World War I. It was aided by land reforms based widely on the slogan: "The land belongs to those who till it." Hungary was in some degree an outstanding exception in that large estates were still dominant. But in general the peasant, economically and politically, during the interwar period enjoyed a status not previously achieved.

Late in World War II and promptly thereafter further agrarian reforms were promulgated. These differed from country to country not only as to the amount of land expropriated, but also as to the several stages involved, as to the upper limit in size of holdings permitted, rate of payment, etc. The proportion of total arable land actually turned over to the poorer peasants as their own private property ranged from about 50 percent in Albania to only 2 or 3 percent in Bulgaria. For Eastern Europe nearly 19 million hectares, or about 25 percent of the total agricultural land was expropriated, about half from large estates and the other one-half from German and other minorities. Some 13,300,000 hectares were distributed to individuals and 5,400,000 hectares to public bodies. Thus economic results, in and of themselves, could have been and probably were major in some areas. Social changes based largely on the elimination of the landlord class, of many of the so-called kulaks, have been significant.

A major present characterization would seem to be that agricultural organization in Eastern Europe now represents a "halfway house." It has started, but has not yet nearly completed, the shift to the Soviet type of organization. Unlike the Soviet Union, private property still prevails in the agriculture of the so-called Peoples' Democracies (with the exception of Bulgaria). In Poland 80 percent, in Czechoslovakia 50 percent, and in Hungary 60 percent of the agricultural area is managed by peasants who still are owners of the land. They are, to be sure, tied by compulsory deliveries to the planned economy. Economic and administrative pressures including discriminatory practices as to deliveries, credit and taxes are aimed at speeding up collectivization. Open violence has been avoided, however, and ultimate reforms have been at least delayed

[65] Foreign Crops and Markets, U. S. Dept. of Agriculture, vol. 69, No. 6, August 9, 1954, p. 159.

in order not to disrupt needed production.[66] Neverthless, the trend toward collective and state farms, to the disadvantage of the private landholder, has continued (table 32). Somewhat the same problems of lagging production, particularly with respect to livestock products, exist as in the Soviet Union. Proposed remedial actions also have been along rather the same lines. There has perhaps been some evidence of relaxation under strain, but no real reversal of direction.

In Czechoslovakia, as in the Soviet Union, by late 1953 it was officially admitted that agriculture, comparatively, was lagging badly—though it had increased under the 5-year plan by about one-third to approximately prewar production levels. Much of the difficulty was blamed on the party, in its not very successful attempts to make over the existing strong peasant cooperatives based on voluntary self-help, into new state operated "cooperatives" with collectivization the ultimate aim.

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[66] See especially George Kemeny, Eastern Europe, Developments in Social and Economic Structure, World Politics, vol. VI, No. 1, October 1953.

TABLE 32.—*Collective and state farms in Eastern Europe*

Country	Period (December unless otherwise indicated)	Cooperative farms						State farms		Cooperative and state farms as percent of total agricultural area
		Number	Incorporated private farms		Agricultural area			Agricultural area		
			Number	Number per cooperative	Millions of hectares	Hectares per farm	Percent of total agricultural area	Millions of hectares	Percent of total agricultural area	
		Thousands	*Thousands*							
Bulgaria	1947	0.5	44	80	0.2	328	4	0.0	1	5
	1948	1.1	79	113	.3	266	6	.0	1	7
	1949	1.6	161	100	.6	348	11	.1	2	13
	1950	2.6	538	206	2.2	840	44	.1	2	46
	1951	2.7	583	212	2.3	844	46	.1	2	48
	1952	2.7	583	212	2.5	914	51	.1	2	53
Czechoslovakia [1]	1950	3.8			1.1	302	15	.8	10	25
	1951	4.5			1.3	293	17	.8	10	27
	1952	7.8			2.6	332	34	.8	10	44
Eastern Germany	1951							.3	5	5
	1952 (November)	1.3	14	10	.1	85	2	.3	5	7
	1953 (September)	4.8	61	13	.7	154	11	.3	5	16
Hungary	1948	.4								
	1949	1.5	40	27	.2	142	3	.3	4	7
	1950	2.3	89	39	.5	206	6	.4	6	12
	1951	4.7	236	50	1.0	221	14	.6	8	22
	1952	5.3	318	60	1.5	282	20	.9	12	32
	1953 (March)		336		1.6		21	.9	12	33
Poland	1950	2.2	50	23	.5	213	2	2.2	11	13
	1951	2.9	72	24	.6	207	3	2.5	12	15
	1952	4.9	104	21	1.1	225	5	2.9	14	20
	1953 (April)	7.3	146	20	1.3	175	6	2.9	14	21
	1953	8.0	200	25	1.4	170	7			
Rumania [2]	1948	.4	20	50		24		.5	4	5
	1949	2.0	102	52	.1	76	1	.5	4	5
	1950	3.7	423	113	.6	170	4	.5	4	8
	1951							.5	4	
	1952	3.6								13
	1953 (March)	4.0	300	75	1.0	247	7	1.5	11	17

Yugoslavia [3]	1947	.8	41	52	.2	271	2			
	1948	1.3	60	46	.3	246	3			
	1949	6.4	324	50	1.8	277	15	.5	4	19
	1950	6.9	419	60	2.2	319	18	.5	4	22
	1951	6.9	421	60	2.6	377	22	.5	4	26
	1952	5.3			2.5	476	21	.5	4	25
	1953 (September)	2.5								

[1] Excluding cooperative farms of type I. These numbered 1,300 at the end of 1950 and 1,109 at the end of 1952.

[2] In 1948 and 1949: type I cooperative farms only.

[3] No account is taken, either in the area of State farms or in total agricultural area, of about 2,000,000 hectares rough grazing belonging to the state.

NOTE.—The figures are not strictly comparable because of differences in definitions (particularly that of the cooperative farm) from country to country and from year to year.

Source: United Nations—FAO. European Agriculture—A Statement of Problems, Geneva, 1954, p. 57.

Hungary, more than other Iron Curtain countries, became the scene of attempted industrialization—with all that meant in the shifting of manpower from agricultural production. Collectivization was carried further than in others, excepting Bulgaria; as a result, by 1953, with industry three times the prewar level, agriculture had shown no progress. Moreover, when the backswing began after the difficult harvest of 1952, instead of a breathing spell or halt as in the others, there was a token decollectivization in Hungary, the number of kolkhozes declining 12 percent and membership by 41 percent during 1953. Emphasis again has been placed on grain, fodder, and livestock.

Yugoslavia deserves some mention as a special case. Initial postwar steps were taken to socialize agriculture, followed more recently by a relaxation or depressurizing of the movement, though the threat of ultimate collectivization remains. But the peasants may now own land, produce what they choose, sell what they produce, and, if they wish, join Government-sponsored cooperatives. Forced deliveries were ended in 1951; dispersal of collectives began in 1952 and in 1953 a decree was issued permitting peasants to quit collectives and return to private farming. Only about one-third of the 6,000 collective farms which were founded have been continued. Nevertheless, the choice remaining to the individual farmer would appear to continue to be to join the collective, stay poor, or get off the land.

(*c*) *The Soviet Union*

The pattern of agricultural organization in the Soviet Union has advanced much farther along toward the ultimate goal than in the satellites of Eastern Europe. The goal, associated with that pattern under the prevailing political doctrine, is to organize, capitalize, and develop the agricultural economy so as to release millions of rural people for work in industry and, at the same time, to provide an abundance of food and agricultural raw materials for the cities and their industries. Enforcement and incentives have varied from time to time.

The present organization of agrarian collectivism began as early as 1928, with the launching of the first 5-year plan. From the outset the Government had proclaimed the principle of nationalization of all land. However, the peasants, who were active in taking over, were not thinking of nationalization but of parceling the land out among themselves. At first only a few million acres of the more than 100 million confiscated were retained as state farms or communes. But later there was a real war against the peasantry in the early 1930's with millions in some areas starved into submission.[67]

Agricultural organization in the Soviet Union presently falls roughly into a very large socialized sector and a much smaller private sector, with three not mutually exclusive groups of producers in each. The socialized sector, regarded by the outside world as the present-day Russian agriculture, consists of about 90,000 collective farms (kolkhozy) which produce the bulk of the agricultural output, some 5,000 state farms (sovkhozy) which are operated by hired workers and produce more than 10 percent of the total output, and of minor importance overall, some miscellaneous farms subsidiary to industrial enterprises, hospitals, schools, and so forth.

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[67] See V. P. Timoshenko, Agriculture in the Soviet Spotlight. Foreign Affairs, vol. 32, No. 2, January 1954, especially p. 246.

The major factor in the private sector consists of collective farmers, kolkhoz members (kolkhozniki), who utilize their spare time as individual producers of crops and livestock on small plots allocated to each household from the land held by the kolkhoz. These intensive efforts at times have been estimated to account for as much as 20 percent of some vegetables and livestock products appearing in the market. A minor number of peasants remain as independent farmers (edinolichniki) on small plots of state land. Some who are primarily engaged in nonagricultural activities may utilize small household plots for garden food crops or minor livestock.

The kolkhoz is nominally a peasant cooperative formed by the farmers of a given area, perhaps sometimes voluntarily but usually under compulsion. They pool their land (which belongs to the state but is leat to the collective) and equipment, agree to operate cooperatively by electing a manager and sharing the work and proceeds. The individual contributes "workdays" of specified number and quality and is rewarded with a residual of the physical product as well as a share of the money income of the collective derived from the sale to the state of fixed quantities of the product at fixed prices. Machine tractor stations provide the farming equipment and the more skilled workers to operate such machinery and in turn must be paid with some part of the product. They each serve several farms and serve also as a powerful arm of control of collective agriculture.

In the prewar period the number of kolkhozy was above 200,000. As of the beginning of 1950, before the initiation of the consolidation, there were 254,000 with an average of 672 hectares of arable land each. But by the end of 1953 there were only 94,000, with of course the size much enlarged by amalgamation to an average of more than 1,600 hectares. There was also some official mention of, or trend toward, the creation of still larger more complex units—agro-cities with some related industry attached thereto. That development seems to have been held in abeyance after some official discussion about 1950.

The member workers of the kolkhoz (the kolkhozniki), in addition to "workdays" due the collective farm, have some time which they may devote to the care of crops or livestock maintained on small tracts of land allocated to their individual operation by the collective. The surplus therefrom has commonly been sold in the free market and restrictions on these "private" activities have been among the prominent items in the discussion of Soviet agricultural organization since rules were promulgated in 1935 restricting the size of plot, livestock, and tools the individual might use privately. The trend, though erratic, would seem to be toward further restriction on this sector insofar as and as soon as its products are not vitally needed; temporary relaxation of restriction after August 1953 should be noted.

6. THE STATE OF AGRICULTURAL TECHNOLOGY

The use of power, whether from draught animals or tractors, is generally considered a major index of advancing agricultural technology. Table 33 indicates a widespread decline since the prewar period in the number of draught animals in relation to cropland. The decline may have been slightly greater in independent Europe than elsewhere, though the difference from area to area is certainly not striking. It

may be noted that in this respect the Soviet Union has held to the full prewar level whereas the United States has shown a sharp decline. The ratio of draught animals per agricultural male also varies greatly from country to country without, however, apparent sharp zonal differences. The slightly poorer showing of Mediterranean and eastern Europe probably is accounted for by the fact that draught cattle are not included in this particular computation. It may be noted that the substitution of mechanical power for horsepower releases a part of the production facilities formerly employed to produce grain or other feedsuffs for the work stock. This in theory makes possible increased production of industrial crops, animals for use as food, or grains and vegetables to be used directly as human food.

TABLE 33.—*Draught power in agriculture, Europe and the Soviet Union, 1938, 1945, 1952–53*

Region	Number of draught animals per 100 hectares of agricultural area [1] [2]			Draught animals [3] per active male in agriculture, 1952	Number of tractors [4] per 1,000 hectares of agricultural area [1]			Number of active males in agriculture [5] per tractor, 1952 or 1953
	1938	1945	1952 or 1953		1938	1945	1952 or 1953	
Western Europe:								
Austria	170	160	140	0.6	1	2	13	14
Belgium	170	200	150	.7	1	1	8	25
Denmark	210	220	140	1.2	1	1	16	8
France	------	190	170	.7	1	2	7	20
West Germany	310	340	260	.7	------	4	25	7
Ireland	100	110	80	1.0	1	2	3	29
Netherlands	130	120	100	.5	2	3	12	17
Norway	220	220	180	.8	3	4	19	13
Sweden	130	130	80	.8	5	8	[6] 21	5
Switzerland	120	130	110	.4	7	11	20	14
United Kingdom	60	50	30	.5	4	15	27	3
Mediterranean Europe:								
Greece	400	260	280	.5	------	1	2	218
Italy	110	80	100	.3	2	3	5	73
Portugal	90	------	------	.2	------	------	1	256
Spain	100	------	100	.4	------	------	1	264
Eastern Europe:								
Bulgaria	390	------	360	.4	1	------	3	122
Czechoslovakia	230	------	210	.9	1	------	5	33
East Germany	190	------	170	.8	3	------	7	24
Hungary	180	------	160	.3	1	------	3	95
Poland	140	------	120	.8	1	------	3	77
Rumania	150	------	130	.3	------	------	1	236
Other Europe:								
Finland	140	140	140	1.0	2	3	8	18
Yugoslavia	140	70	130	.4	------	------	1	323
Soviet Union	60	35	[6] 60	.6	1	1	2	60
United States	70	50	30	------	7	12	20	2

[1] The data for all years are based on the agricultural area in the most recent year, with the exception of Rumania, for which area as planned for 1953–54 has been used.

[2] Horses, asses, mules, and draught cattle used in agriculture.

[3] Horses, mules, and asses only—no cattle.

[4] No corrections have been made for differences in horsepower per tractor. This may understate the position of certain countries, in particular the Soviet Union and the United States, in which relatively powerful tractors are used. Horticultural tractors are excluded.

[5] The figures relate to active males in agriculture with the exception of the Eastern European countries for which males engaged in forestry, fishing, or hunting are included. Women apparently have not been included, although they are known to make up a very important, even predominant, portion of the agricultural labor force, particularly in Eastern Europe and the Soviet Union.

[6] This figure, an estimate, is questioned because other sources show only three-fourths as many horses in the Soviet Union in 1953 as in 1941.

Source: Rearranged from United Nations-FAO, European Agriculture—A Statement of Problems, Geneva, 1954, table 6, p. 11 and table 11, p. 22.

Tractors are quite a different story, with Western Europe far more abundantly supplied, per hectare or per agricultural man, than either Southern or Eastern Europe. The United Kingdom is actually on much the same level as the United States per unit area farmed. The United States at the beginning of 1953 had nearly 3,900,000 wheel-type and 171,000 crawler-type tractors; averaging overall 20 to 22 horsepower. Only Finland, Czechoslovakia, and Eastern Germany of the eastern countries have such equipment in somewhat the same abundance in relation to agricultural area and agricultural manpower as the West. The Soviet Union makes a distinctly more favorable showing than much of Eastern Europe or Mediterranean Europe with respect to tractors per active male in agriculture, though not with respect to number of tractors in relation to agricultural land.

Other aspects in which Western Europe is less adequately served than the United States is refrigerated storage and advanced processing equipment in which the Soviet bloc is notably deficient at present. The probable importance of such mechanization to growth trends in food production can be summarized as follows:

> Except perhaps in the U. S. S. R., the greater use of machinery on farms will not lead to any appreciable increase in cultivated area in these regions, but it will make a further contribution to production by assuring that a greater proportion of the operations is carried out at the most favorable periods, so that average yields will be somewhat raised. Furthermore, where mechanization has advanced sufficiently to lead to a decline in numbers of draft animals, every further advance also brings a gain in land freed from feeding work animals to feeding productive livestock or growing crops for food or industrial uses.[68]

The use of commercial chemical fertilizers is another partial test of developing technology, though their use, too, is affected by the type of crop grown, the newness or natural fertility of the soils, and by the livestock kept and manures available.

The very substantial increases in the use of the major commercial fertilizers since the war is evident from table 34. The rising trend of use is especially well documented for Western and Mediterranean Europe. While it is no doubt true that some considerable part of the increase may be properly credited to United States aid, as the least expensive way of providing for the rehabilitation of food production in much of free Europe, it is to be noted that some other areas not recipient of such help, for example Spain and Finland, also made remarkable increases in the use of such fertilizers.

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[68] FAO, The State of Food and Agriculture 1953—Part II. Longer Term Prospects, Rome, January 1954, p. 53.

TABLE 34.—*Consumption of chemical fertilizers: Europe, the Soviet Union, and the United States, 1938, 1953, 1954 (forecast)*

Area	Nitrogen fertilizers (1,000 metric tons of nitrogen (N))			Phosphate fertilizers [1] (1,000 metric tons of phosphoric acid (P_2O_5))			Potash fertilizers (1,000 metric tons of K_2O)		
	1938	1953	1954 (forecast)	1938	1953	1954 (forecast)	1938	1953	1954 (forecast)
Western Europe	886.0	1,345	1,417	1,270	1,777	1,865	1,315	2,000	2,076
Mediterranean Europe	186.0	347	369	360	608	619	51	82	90
Western and Mediterranean Europe (total)	1,072.0	1,692	1,786	1,630	2,385	2,484	1,366	2,082	2,166
Captive Europe [2]	435.0	312	316	444	197	197	780	710	710
Other Europe [3]	6.1	31	40	31	96	112	16	50	49
Soviet Union	121.0	[4] 300	.....	295	[4] 500	.....	[5] 165	[4] 288	.....
United States	346.0	1,506	1,660	675	2,186	2,395	379	1,582	1,733

[1] Excluding ground rock phosphate.
[2] Bulgaria and Rumania generally not available; postwar figures are largely estimates.
[3] Finland and Yugoslavia.
[4] For 1950.
[5] 1937.

Sources: Data for 1938 from FAO, Yearbook of Food and Agricultural Statistics, 1949, vol. 1, Production, Washington 1950, pp. 169–175. Data for 1953 and 1954 from FAO, An Annual Review of World Production and Consumption of Fertilizers, 1953, Rome, November 1953, pp. 46–56. Estimates for the U. S. S. R. computed from Nimitz, Nancy, Statistics of Soviet Agriculture, RM–1250, May 1954, table VI, p. 50.

Eastern Europe, as far as information is available at all, even in estimated form, has made more modest gains, and that from a generally lower starting base. Eastern Germany, formerly a large user, is indicated as not having regained the prewar level.

> While accurate consumption data are difficult to obtain, it is estimated that the countries of Eastern Europe use relatively small amounts of phosphoric acid supplied as commercial or chemical fertilizer, although considerable quantities are supplied as farm manures * * *. The total phosphate supply is considered as supplying roughly 10 $K_2P_2O_5$ per hectare of agricultural land in Eastern Germany, whereas the real need is much higher. Should the same pattern apply to Eastern Europe, the use of phosphoric acid is relatively quite low * * *.[69]

Information on the amounts of commercial fertilizers used in the Soviet Union is, if possible, even more fugitive than for Eastern Europe. It is stated by one authority that the principle of independence from foreign supplies (from capitalistic countries) had become so sacred that practically the whole supply of mineral fertilizers was used on the so-called industrial crops, cotton, flax, and sugar beets—that nearly half of the nitrogen fertilizers were devoted to cotton.[70] It may be noted that even now, in the United States a large part of the commercial fertilizer is used on tobacco, cotton, and vegetables.

In 1938 the total application in the Soviet Union of all mineral fertilizers was 3,216,300 tons, of which 705,000 tons were nitrogenous (20.5 percent N?); 311,400 tons were potassic (41 percent potassium oxide); 1,593,200 tons were phosphoric (18 percent P_2O_5); and 605,900 tons were Thomas slag.[71]

[69] FAO, Fertilizers, A World Report on Production and Consumption. Rome, August 1952, p. 22.
[70] Timoshenko, V. P., The Journal of Political Economy, vol. LXI, No. 6, December 1953, p. 490.
[71] Soviet statistical yearbook quoted by Nimitz, op. cit., p. 55.

According to the fifth 5-year plan gross commercial fertilizer output in 1955 was scheduled as high as 10 million tons, 188 percent of the figure for 1950, which was not fulfilled. This schedule apparently has not been fully met. Meanwhile, a goal of about 17 million tons by 1959 and about 29 million tons by 1964 has been set. Jasny indicates that if the targets are met, granting efficient utilization, this alone should increase gross farm output about 1 percent per year.

Of other aspects of agricultural technology and its progressive development and application much less can be said with certainty. The scientific development of animal and plant genetics and the application of such principles to the commercial breeding of agricultural plants and animals, crop rotations, weed control, balanced livestock feeding, reclamation by drainage and irrigation, improvement in carrying capacity of grasslands, protection by tree shelter belts; these and others are aspects which have been explored and utilized to some degree in all the areas under discussion. Technology is most highly developed in Western Europe, although Eastern Germany and Czechoslovakia are also rather highly developed. Both Southern and Eastern Europe in the past, and very likely still, lag comparatively, not only in basic technological development but also in the application of technology worked out elsewhere. The Soviet Union, it would appear, may well be regarded as involved in much experimentation along such lines, some of it oriented in a fashion regarded by the Western World as more political than scientific. Yet it seems clear enough that there has been more work, more exploration, than in some other areas. Of plant explorers, of soil scientists and foresters, among others, they have had their share. The work has been slowed up by party doctrine but has probably been extensive in scope and some of good quality. It is rather a question of whether it has been possible to translate what has been learned there or elsewhere into practical application; an important aspect which has been slow and difficult enough in western Europe among other places. In any case, Timoshenko and others find that the major plans for reforestation, for improved crop rotation with perennial grasses, and for major irrigation development have so far presented more problems than results.

C. Raw Materials

In this section we are concerned with: (1) agricultural products other than food, particularly cotton, wool, and flax; (2) forest products, especially sawn timber and pulp; and (3) mineral raw materials, other than mineral fuels and iron ore which are discussed elsewhere.

1. SOME AGRICULTURAL RAW MATERIALS

Independent Europe is definitely a deficit area as regards major textile fibers. Of the 18 countries for which pertinent data are available, imports of fibers in 1952 amounted to $2,908,000,000 compared with exports of $531 million. Textile fibers are among the most important raw materials utilized by workshops in the area. Considerable value is added by manufacture, after which the products not only contribute substantially to the comparatively high standard of living of the area but also serve as a major export product.

With respect to particular fibers, small amounts of cotton are produced in Mediterranean and Eastern Europe (table 35). In the Soviet Union, where self-sufficiency has been much desired, the crop has achieved a level approximately one-third the size of United States production, and much larger than the production of all of Europe.

Production of flax fiber in Western Europe appears to exceed that of captive Europe, whether measured by area devoted to the crop or by actual fiber harvested. However, there is greater emphasis upon this crop in the Soviet Union than in other European countries.

TABLE 35.—*Production of commercial fibers; Europe, the Soviet Union, and the United States*

[Thousand metric tons]

Area	Cotton [1]		Flax		Hemp [2]		Rayon [3]		Wool [4]	
	Pre-war	Post-war	Pre-war	Post-war	Pre-war	Post-war	Pre-war	Post-war	Pre-war	Post-war
Western and Mediterranean Europe	20	59	71	125	9	19	244	730	83	87
Captive Europe	7	28	47	64	47	.....	.....	188	25	25
Other Europe	.....	1	13	2	47	19	.....	9	1	1
Soviet Union	645	1, 230	640	800	203	.....	11	.....	60	91
United States	2, 756	3, 564	.....	.....	.....	.....	130	543	92	60

[1] Lint basis.
[2] Includes both *Cannabis sativa* and *Crotalaria juncea.*
[3] Includes staple fiber and filament yarn.
[4] Clean bases.

Source: Summarized and computed very approximately from details found in FAO Monthly Bulletin of Agricultural Economics, vol. III, No. 5, May 1954; FAO Yearbook of Food and Agricultural Statistics, 1949, I Production, pp. 106-109; and USDA, Foreign Crops and Markets.

Hemp fiber is primarily a product of Eastern Europe and the Soviet Union—the West is generally deficient and the Soviet Union is a major factor among world producers.

Rayon is included in this discussion since cotton linters, as well as other cellulose pulps, are used as a raw material base. Independent Europe appears to be substantially in the lead in the production of rayon, though Eastern Germany, Czechoslovakia, and Hungary have important production, as does the Soviet Union. The United Kingdom as the major producer, appears to have expanded significantly since the prewar period, as indeed have most other producers.

Western Europe, captive Eruope, and the Soviet Union are all to be regarded as deficit areas with respect to the production of wool. In fact the Western area, because of extensive manufacture and export of finished goods, is the world's major raw wool importing area whereas captive Europe is more nearly self sufficing, but at a lower level of usage. Activity by the Soviet Union in world wool auctions, particularly Australian, in recent years, has suggested either stockpiling, expanded military use, or rising domestic demand. The statistics indicate an increase in domestic production.

2. FOREST RAW MATERIALS

It is reasonably well known that Western and Mediterranean Europe, excepting only northern Europe and Austria was and is a timber deficit area. The decline in imports during the postwar period represents a decline in availabilities (table 36). The deficit in several

countries resulted not so much because of lack of fairly substantial forests or the harvesting of them but rather because of relatively high per capita usage.

TABLE 36.—*Total forest and the industrial woodcut, by regions*

	Total forest, (million hectares)	Million cubic meters			
		Prewar		1950	
		Domestic production	Net exports (+) or imports (−)	Domestic production	Net exports (+) or imports (−)
Western and Mediterranean Europe	77.5	102.3	−38.8	94.1	−11.5
Captive Europe	21.3	26.8	+7.1	26.4	+1.7
Other Europe	27.9	33.5	+21.8	34.6	+19.0
Soviet Union	628.0	255.0		[1] 240.0	
North America	656.0				
United States of America		170.0		230.7	
Canada		40.1		71.7	

[1] Another source gives 320 for 1949; 355 planned for 1950.

Historically, Western Europe secured virtually all its needed imports of softwood forest products from the Soviet Union, the Baltic countries, Finland, Sweden, and Austria. Political and economic considerations have prevented the resumption of some of that trade. The result was that the immediate postwar situation in much of Europe was one of acute shortage of forest products. Even the Soviet Union, with all of its vast forests, apparently experienced somewhat the same deficit situation in the early postwar period because of the generally unfavorable location of the reserves in relation to areas of need plus the fact that both labor and processing equipment had been seriously depleted. Reparations in wood which had been collected by the Soviet Union from several Eastern European countries and Finland were completed as far as Finland was concerned about 1948, thus making possible increased exports from that north country to the West. There was again acute shortage during the boom accompanying the Korean war but afterward worries about surpluses came to the front in the surplus-producing areas of northern Europe leading to the slowing up, even the cancellation of some proposed development.

There are some important unanswered questions respecting the seriousness of overcutting during and after the war in various parts of captive Europe and in Western Germany. But by and large it would appear that the increased production which occurred in Scandinavia after the war is not likely to be further enlarged. If additional supplies are to be found in the near future they probably must come from the Soviet Union.

Total forest land of the Soviet Union is very large, covering approximately 743 million hectares, in comparison with 145 million hectares in Europe and 250 million in the United States. Of the total, 628 million hectares are classed as forested land; 114 million hectares as open areas. By area, about 80 percent are conifers. The volume of standing timber is estimated as 58,700 million cubic meters, of which 90 percent, covering 55 percent of the hectares, is mature or overripe. The remaining 10 percent of the volume is about evenly divided

between maturing forests and those classed as young and saplings.[72] About 80 percent of the total consists of softwoods, roughly twice as large as the resources of all the rest of the world of this very important raw material. However, because of climatic conditions the annual rate of growth is low and a large part of the reserves are poorly located in relation to centers of population and major industrial development.

Annual cuttings expanded to about 500 million cubic meters of roundwood equivalent in the prewar period. War demolition, shortage of labor and inadequate maintenance of facilities during the war left the industry much depleted in the early postwar period. The damage was of course concentrated on the facilities of the industry rather than on the resource. Rehabilitation, with increased mechanization, proceeded rapidly. By 1948 the roundwood cut had been restored to prewar level and is reported to have reached the 600 million cubic meters level in 1950, of which total 280 million cubic meters were industrial wood. The proportion of fuel wood in the cut declined but as late as 1950 constituted 53 percent of the total.[73]

Prior to World War II, Europe's timber balance had been closely related to the amounts coming from the Soviet Union and the Baltic States. But those who had hoped that Western Europe might obtain substantial supplies of sawn softwoods from the Soviet Union in the postwar period have so far been disappointed. Small amounts were offered in 1952. But overall it became more certain that not only the war but reconstruction in the Soviet Union was placing a heavy drain on the more accessible forest areas, some of which were already badly overcut. On the other hand it appeared that some of the Far North reserves, in Siberia and areas of European Russia opening on the Barents Sea might actually be more accessible to Western Europe than to the populous industrial areas of the Soviet Union. Thus the problem of growth trend for the years ahead is a politico-economic one of whether the Soviet Union chooses to market such resources. If so, then capital and labor must be engaged not only in the usual forest harvest but in providing the facilities for water shipment during the short summer. Such development would appear likely to receive high priority only if the exchange to be gained thereby can be used to obtain items not otherwise available.

Of the total industrial wood consumed in Europe in 1950 saw and veneer logs accounted for about 58 percent of the total, pulpwood for 21 percent, pit props for 9 percent and other unprocessed wood (poles, pilings, posts, etc.) for 12 percent. A further breakdown indicates that about 43 percent of the total is used as sawn softwoods, about 10 percent as sawn hardwoods.

With respect to the more important subclasses of forest raw materials it appears that the Soviet Union and its captives have made modest increases in production since the prewar period (table 37). Western and Mediterranean Europe, on the other hand, are somewhat below their prewar level of production, as is other Europe (Finland and Yugoslavia). Though some of this decline is a statistical flaw, i. e. the counting of all of Germany with the West prewar, this of itself

[72] ECE/FAO staff, Timber Prospects in the U. S. S. R., Unasylva, vol. VII, No. 2, June 1953, pp. 70–72.
[73] ECE/FAO staff, Timber Prospects in the U. S. S. R., Unasylva, vol. VII, No. 2, June 1953, pp. 70–72.

is not enough to reverse the opposed trends of the two areas. Serious overcutting during and immediately following the war is the probable major explanation of the poorer showing of the Western area. Major expansion of production in the United States and Canada since prewar is evident, more than counterbalancing the decline in Western Europe.

Though sawn woods and plywood production are of major significance to housing reconstruction, the demands of advancing civilization on pulpwood are notable. The raw materials for pulp and paper are exploited primarily in Europe and North America which produce 90 percent and consume 87 percent of the world's paper and board. World consumption has averaged about 46 million tons annually in recent years and some estimates indicate an increase to a total of 60 million tons by 1960–62, of which increase 10 million tons would take place in Europe and North America.

TABLE 37.—*Production of selected forest semi-raw materials, by regions*

Regions	Sawn wood [1] (1,000 cubic meters)		Wood pulp [2] (1,000 metric tons)		Pit props (million cubic meters)		Plywood (1,000 cubic meters)	
	1938	1950	1938	1950	1938	1950	1938	1950
Western and Mediterranean Europe [3]	37,990	32,575	7,885	6,686	10.71	8.59	712	824
Captive Europe	10,540	14,440	584	1,261	3.10	3.80	121	317
Other Europe	8,080	7,780	2,137	1,957	1.86	1.52	255	245
Soviet Union	34,000	39,000	1,163	2,100	10.00	12.00	885	810
United States	58,580	89,696	5,384	13,471	.70	3.06	575	2,368
Canada	8,890	17,440	3,254	7,462	.19	.40	46	286

[1] Includes both coniferous and broadleafed.
[2] Includes both mechanical and chemical types.
[3] All of Germany was included with Western Europe in the 1938 totals.

Source: Summarized from country details shown in United Nations–FAO, European Timber Statistics, 1913–50, Geneva, 1953.

A considerable part of western and Mediterranean Europe may be regarded as a deficit pulpwood area, although the northern part of independent Europe is in large surplus status. Somewhat the same divergency would appear to exist east of the Iron Curtain with the captive area, comparatively, not abundantly supplied whereas the raw material situation in the Soviet Union may be described in terms of abundant but rather poorly located resources.

The developing situation can be best derived by consideration of some recent statements by experts: [74]

> Europe is today, as it was between the wars, the most important supplier of pulp and its products to other regions. Its pulp and paper industry suffered badly during the war, and though it recovered rapidly during the postwar years the increase in output over the prewar level is modest compared with that in North America. Nevertheless, by 1950–52 it was on balance exporting well over 1½ million tons of pulp and paper to the rest of the world. This overseas trade is of high importance to the European economy, and every effort will be made to maintain it.
>
> The industry continues to expand, though with coniferous resources limited and localized there is increasing emphasis on temperate hardwoods (poplar, beech, birch) and straw. A year ago it was estimated [75] that an additional 2½ million

[74] FAO, Preliminary Summary of the World's Pulp and Paper Resources and Prospects Conference, seventh session, November 1953, ME 1/473/Rev. 1, pp. 22–25.
[75] FAO, European Timber Trends and Prospects, Geneva, 1953.

tons of pulping capacity might be built in the current decade, bringing nominal capacity up to about 14½ million tons by 1960. This increase in pulping capacity corresponds to an increase of well over 3 million tons in paper and board production; the forecast of future paper and board requirements reckons with an increase of 4 million tons in the same period. The recent recession introduced a note of caution in forward planning, and this figure may not be fully realized. But the indications are that the rate of growth of the pulp and paper industry will, in the coming years, be tempered closely to the trend in European demand, whether that increases slowly or rapidly, while a margin will be conserved to enable the important overseas trade to be maintained. It would be surprising, however, in the light of recent events in the international pulp and paper market, if new investment took place specifically aimed at satisfying a conjectural increase in the requirements of other regions.

* * * * * * * *

The Soviet Union possesses the largest area of coniferous forest in the world. Given a substantial expansion in her pulp and paper industry and the existence of conditions propitious for an increased volume of trade with the rest of the world, the U. S. S. R. could become an important exporter of pulp and paper. Whether this takes place in the long term or not, the indications are that no significant contribution can be expected in the course of the current decade. Since the war the main emphasis has been on the production of lumber to meet reconstruction needs, and the timber industry has with difficulty met the heavy demands made upon it. All the pulpwood cut (71½ million cubic meters in 1950) is used internally, and there is not much likelihood that pulpwood shipments to the rest of Europe, which averaged about 3 million cubic meters annually before the war, will be resumed. Domestic demand for pulp products is rising rapidly; daily newspaper circulation, for example, rose from 31 millions in 1949 to 41.7 millions in 1953.[76] There are no grounds for believing that current expansion plans in the pulp and paper industry are designed to do more than meet the rise in domestic demand.

3. MINERALS [77]

Minerals are hard to generalize about; each one is pretty much of a story in itself. The production of most minerals in Europe, the Soviet Union and North America has increased in comparison with prewar production. Captive Europe, by and large, is poor with regard to most minerals. How much of the apparent paucity may be mere lack of information is not certain. It is certain that there is still exploration to be done, not alone in captive Europe. Some of Western Europe is reported to be under new and intensive exploration and certainly the Soviet Union, the United States, and Canada are by all odds far from finished with discoveries, some of them very likely of great significance.

Independent Europe, particularly Mediterranean Europe, produces rather surprising amounts of some minerals. Not only production, but reserves of mercury, sulfur, tungsten, zinc, lead, copper, and bauxite appear to be substantial. The Soviet Union appears to be in strong surplus position on some important items like chromite and manganese but is, thus far, weak in others. One might conclude that independent Europe, plus Yugoslavia, plus the Americas, Australia, and Africa, is in strong position with respect to nearly all mineral items relative to the Soviet bloc. But that, in the longer term, overlooks the fact that the Soviet Union has much territory to explore. Nevertheless, in the shorter term there appears to be a factor of techno-

[76] Official figures relating to all newspapers, not only dailies.
[77] Production by the United States and Canada is included in table 39 for comparative purposes but is not much discussed in the text.

logical lag, not only in geophysical exploration, but in mineral recovery and ore dressing as well as in efficient metallurgical utilization which, for most items, suggests that the gap between the Soviet bloc and the West is even wider than at first it might appear to be on the basis of production. A brief discussion of several of the more important minerals follows, with statistical data for Western and Mediterranean Europe, captive Europe, other Europe, the Soviet Union, the United States, and Canada, presented in table 40.

Chromite

Western and Mediterranean Europe (as well as the United States) imports practically all of its rather large requirements of this important material. Greece has increased production whereas that of Portugal, never very large, has declined. Turkey, not shown in table 40, is a major producer with 602,000 tons in 1951. Captive Europe apparently produces none, but the Soviet Union is among the world's major producers.

Manganese ore

Though Europe, Mediterranean, other and captive Europe all produce small amounts of this catalyst and alloy material, their production in total is insignificant in relation to that of the U. S. S. R., which has long been among the major exporters. The West must import this material.

Nickel

More than three-fourths of the world's total comes from Canada; most of the rest is produced in the Soviet Union and New Caledonia. Norway and Sweden produce small amounts as does Finland, though the major Finnish mine and smelter at Petsamo were lost to the Soviet Union. A new nickel refinery at Kristiansand, Norway, with an annual capacity of 30 million pounds of nickel is in operation, apparently using largely foreign ore.

Tungsten

This important ferro-alloy, though not abundant, is fairly widely distributed. Portugal, Spain, and France provide nearly all of the production of independent Europe which is somewhat larger than the estimated production of the Soviet Union. The substantial and increasing production of China, which accounts for nearly one-third of the world's total, is to be noted. The production of the Americas is only about two-thirds as much as the estimated production of China.

Bauxite and aluminum

Production of the chief aluminum ore bauxite and the reduced product, primary aluminum, presents two rather different patterns since the possibility of mining the ore is first of all a resources problem, whereas the production of aluminum depends rather directly upon an abundance of comparatively inexpensive electric power. Western Europe, with or without "other" Europe, is definitely more productive of this light metal than the Soviet Union plus captive Europe, for which Hungarian deposits provide the main captive resource. The United States and Canada, now that the Kitimat development has begun production, make a very favorable showing.

Copper

Western and Mediterranean Europe has moderately important copper production, which is, however, exceeded by "other" Europe and much exceeded by the production of the Soviet Union. Captive Europe apparently is poor in copper. Copper production in both Canada and the United States substantially exceeds that of the Soviet Union. Western Germany has large smelter facilities.

Lead

Western and Mediterranean Europe is fairly rich in rather well dispersed lead resources. Two countries, Spain and Western Germany, each produce more than 50,000 tons per year. Italy is not so far behind. And Yugoslavia, if its resources are considered as available to the West, is the top producer in Europe.

Of the captive countries, only Poland is indicated as a major producer and her production is only about one-tenth that of the West. The Soviet Union alone produces a substantial amount—much more than the captive area and about one-third as much as the annual production of the United States.

Zinc

The production of Western and Mediterranean Europe is about 4 times as large as that of captive Europe, twice as large as that of the Soviet Union, about the same size as Canadian production, but only half as large as that of the United States.

Mercury

Spain and Italy together produce about two thirds of the estimated world's supply of this heavy metal, which is presently in brisk demand. Apparently their production may be expected to increase. Yugoslavia also is an important source. The United States, Canada, Mexico, and China are significant producers and the Soviet Union is believed to have at least modest supplies.

Tin

Europe and the Soviet Union, as well as the United States and Canada, produce very little tin. All apparently must depend for the indefinite future on imports for most of their requirements. Production is at present largely confined to the Far East, Bolivia, and two areas in Africa.

Sulfur

Italy is the world's second highest producer of sulfur, basic to sulfuric acid, which has major industrial uses. France and Spain also produce significant amounts. The rest of Europe apparently is not productive. United States production is much larger than that of the Soviet Union.

Cement

Capacity for production of this important material of the modern industrial world is more often a matter of requirements and industrial incentive than it is a matter of raw material which is, for the most part, widely available in most countries. Production in free Europe appears to be about 2½ times that of the Soviet bloc.

Phosphate rock

This is important not only because of certain industrial uses but also, and primarily, as a basis for fertilizer, either as raw rock or as superphosphates. The modest but important production of Western Europe (mostly France and Spain) is supplemented by that of French Morocco, the world's second largest producer, with 4,716,800 metric tons in 1951. Production in the Soviet Union, though much larger than that of Western Europe, was only about one-half as large as that of French Morocco and one-fourth as large as that of the United States. Trends in major producing areas are upward and there appear to be sufficient resources to support expansion.

Potash

Western Europe, particularly Western Germany and France, are large producers of potassium salts. Spain also is a producer, as is Eastern Germany. The Soviet Union, together with Eastern Germany, produce only about one-sixth as much as free Europe. Production in the United States is approximately the same as that of the Soviet Union. Apparently all of the major producers have fully adequate resources for further expansion, as needed.

TABLE 38.—*Area and production of selected commercial fibers, by regions*

Regions	Cotton				Flax fiber				Hemp fiber				Rayon		Wool	
	Area, 1,000 hectares		Production, 1,000 metric tons		Area, 1,000 hectares		Production, 1,000 metric tons		Area, 1,000 hectares		Production, 1,000 metric tons		1,000 metric tons		1,000 metric tons, clean basis	
	Pre-war [1]	Post-war [2]	Pre-war [1]	Post-war [2]	Pre-war [1]	Post-war [2]	Pre-war [1]	Post-war [2]	Pre-war [1]	Post-war [2]	Pre-war [1]	Post-war [2]	Pre-war [1]	Post-war [2]	Pre-war	Post-war
Western Europe:																
Austria					2	1	0.7	0.6		1	0.1	0.6	1.0	31.7		
Belgium					24	32	21.7	26.9					5.7	26.9		
Denmark																
France					32	59	20.7	37.1	3	6	3.9	5.4	32.9	94.3	10	9
West Germany					18	7	6.5	3.2	2	3	1.2	2.7		169.4		3
Ireland					2	4	1.1	2.5							5	5
Netherlands					13	34	12	31.7					9.3	33.4		1
Norway													.1	11.6	2	2
Sweden						3		2.9		2		1.3	2.5	12.2		
Switzerland													5.5	18.4		
United Kingdom					10	15	5	8					61.3	190.2	31	32
Total					101	155	67.7	112.9	5	12	5.2	10	118.3	588.1	48	52
Mediterranean Europe:																
Greece	57	89	16	32		2		.5					3	2.3	5	5
Italy	15	37	3	8	13	19	2.6	3.6					121.7	106.2	8	10
Portugal													.2	1.2	6	6
Spain	11	88	1	19	1	14	.4	8.4	4	9	4.2	9	.9	32.1	16	14
Western and Mediterranean Europe—total	83	214	20	59	115	190	70.7	125.4	9	21	9.4	19	244.1	729.9	83	87
Captive Europe:																
Bulgaria	40		7	9					7.0		3.6				6.0	8.0
Czechoslovakia					15		8.0		6.0		4.3		4.5	34.5	1.0	1.0
Eastern Germany					11		6.2		4.0		2.9			111.7		2.0
Hungary		46		10	12		1.7		12.0		10.7			0.7	3.0	2.0
Poland					61		23.8	64.0	11.0		5.1	19.0	10.2	39.4	3.0	2.0
Rumania	2			9	19		7.1		38.0		20.8		0.8	1.8	12.0	10.0
Total	42	46	7	28	118		46.8	64.0	78.0		47.4	19.0	15.5	188.1	25.0	25.0

Other Europe:																
Finland					4		1.4							9.3	1.0	1.0
Yugoslavia	3	8		1	13	10	11.3	2.0	49.0	49.0	46.5	18.7				
Total	3	8		1	17	10	12.7	2.0	49.0	49.0	46.5	18.7		9.3	1.0	1.0
Soviet Union	2,027		645	1,230	2,336		640.0	800.0	663.0		202.6		10.9		60.0	91.0
United States	11,493	10,452	2,756	3,564									130.0	543.0	92.0	60.0

[1] 1934–38.

[2] The larger of the 2 years 1952 and 1953. In a few instances 1951 is used if neither 1952 nor 1953 are available.

Source: Mostly from FAO, Monthly Bulletin of Agricultural Economics and Statistics, vol. III, No. 5, May 1954.

TABLE 39.—*Forest area, wood production and use data, by regions*

Regions	Total forest [1] (million hectares)	Hectares [1] per head of population	Percentage [1] under conifers	Estimated net annual growth (million cubic meters) 1948	Roundwood cut [2] (million cubic meters) 1950	Industrial wood				
						1935–38: [3] Consumption per capita, cubic meters roundwood equivalent	1935–38 [4]		1950 [4]	
							Domestic production	Net exports (+) or net imports (−)	Domestic production	Net exports (+) or net imports (−)
Western Europe:										
Austria	2.80	0.40	76	7.40	9.0	0.57	7.61	+3.74	6.19	+4.50
Belgium [5]	.62	.07	35	2.15	2.4	.59	1.56	−3.51	1.95	−3.11
Denmark	.35	.08	57	2.30	1.7	.82	1.03	−2.00	1.01	−2.82
France	11.29	.26	27	25.36	25.4	.32	9.25	−3.97	11.42	+.28
West Germany	[6] 9.72	[6] .14	[6] 70	16.90	26.6	[6] .63	[6] 34.04	[6] −8.59	19.40	−1.28
Ireland	.09	.03	50	.15	.1	.31	.08	−.81	.07	−.96
Netherlands	.25	.03	69	.65	.6	.63	.64	−4.74	.40	−5.42
Norway	6.10	1.91	86	10.80	9.1	1.62	7.64	+2.96	6.94	+2.91
Sweden	22.90	3.32	77	53.00	36.6	1.70	30.18	+19.45	23.80	+19.08
Switzerland	.92	.20	75	3.00	3.3	.50	1.61	−.48	1.74	−.53
United Kingdom	1.31	.03	45	2.75	3.4	.79	1.10	−36.28	3.03	−19.20
Subtotal	56.35			124.40			94.74	−34.23	75.95	−6.55
Mediterranean Europe:										
Greece	.60	.08	64	3.30	3.9	.11	.10	−.70	.21	−.85
Italy	5.62	.12	20	14.30	14.7	.17	3.85	−3.53	4.57	−3.73
Portugal	2.46	.30	47	4.80	3.7	.18	1.62	+.26	1.35	−.05
Spain	12.50	.46	36	8.00	8.0	.10	2.00	−.60	2.50	−.32
Total, Western and Mediterranean Europe	77.53			154.80			102.31	−38.80	84.58	−11.50
Captive Europe:										
Bulgaria	3.08	.43	11	4.00	5.3	.16	.91	−.07	1.80	−.18
Czechoslovakia	3.98	.32	65	10.40	11.4	.38	8.57	+2.84	7.90	+1.20
East Germany				5.20	12.4				9.50	
Hungary	1.11	.12	6	3.00	3.0	.25	.38	−1.92	.80	−1.22
Poland	6.47	.27	88	11.00	11.7	.18	10.05	+3.86	9.43	+.84
Rumania	6.72	.42	24	15.00	15.0	.23	6.90	+2.35	6.50	+1.04
Total	21.36			48.60			26.81	+7.06	35.93	+1.68

Other Europe:										
Finland	20.7	5.18	77	39.00	42.2	1.75	26.26	+19.97	25.10	+16.82
Yugoslavia	7.84	.48	20	15.00	27.4	.36	7.23	+1.79	9.54	+2.20
				54.00			33.49	+21.76	34.64	+19.02
Soviet Union	628.0	3.8	78	700.00	600.0		[7] 255.0		280.0	
United States				345.60	282.7					
North America	[8] 656.0	4.1	70				[7] 170.0		230.7	
Canada				80.00	94.7		[7] 40.1		71.7	

[1] FAO, European Timber Trends and Prospects, Geneva, 1953, p. 12.
[2] Ibid., p. 127.
[3] Ibid., p. 16.
[4] Ibid., p. 210.
[5] Including Luxembourg.
[6] This is for all of Germany; about three-fourths of the forest area and nearly four-fifths of the resources appear to be in Western Germany.
[7] For 1938 only.
[8] This figure is for total forested area and includes open spaces so is not comparable with Soviet Union figure which has been corrected for open space

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TABLE 40.—*Production of some mineral raw materials, by regions* [1]

Mineral	Unit	Western and Mediterranean Europe		Captive Europe		Other Europe		Soviet Union		United States		Canada	
		Prewar	Postwar	Prewar	Postwar	Prewar	Postwar	Prewar	Postwar	Prewar	Postwar	Prewar	Postwar
Ferrous metals: [2]													
Chromite	1,000 metric tons	53	25	2		60	115	225	(600)	2	6		79
Manganese ore	do	48	71	81	105	4	13	275	(2,000)	41	95	102	125
Nickel, primary	do	43	1				1	2	(25)	0			15
Tungsten (60 percent WO_3)	Metric tons	2,349	8,325				20	(2,000)	(7,500)	3,175	5,693		
Nonferrous metals:													
Bauxite	1,000 metric tons	1,230	1,535	551	36	354	453	230	(600)	446	1,878	551	406
Aluminum	do	317	335	2	14	1	3	38	(180)	133	759	266	245
Copper	do	89	43	3	19	12	67	91	(292)	764	842	181	150
Lead (mine)	do	427	194	31	24	9	79	63	(144)	423	391		[3] 10
Mercury	1,000 flasks	112	106	2	1		15	9	[4]	18	7		
Tin (mine)	1,000 long tons	5	3					1	9				
Zinc (smelter)	1,000 metric tons	589	622	179	91	6	13	65	(128)	505	800	156	198
Nonmetallics:												372	883
Asbestos	do	7	29	3		4	11	(86)	(157)	11	47		77
Barite	do	246	489	413	56		30	70		327	767	975	2,687
Cement	do	32,002	52,526	8,139	6,716	1,053	1,974	(5,450)	(10,600)	20,138	42,548		
Phosphate rock	do	135	187	14				1,948	(2,500)	4,020	11,273		
Potassium salts (22 percent KCL)	do	10,498	17,481	7,974	(10,000)			2,318	(2,000)	485	2,245		
Sulfur (native)	1,000 long tons	402	243					(80)	(100)	2,742	5,278		

[1] Prewar and postwar Soviet Union data from Shimkin, op. cit., p. 304. Data for other areas from Mineral Yearbooks of Bureau of Mines, U. S. Department of the Interior. Data used are not an average for a period but more nearly represent a maximum production figure. Parenthesis ( ) mean data are estimates. Figures have been rounded to the nearest whole unit, hence very small amounts are not shown.

[2] Excluding pig iron, which is dealt with in the Iron and Steel Chapter.
[3] For 1944, latest data shown.
[4] Not available.

D. Steel

The emphasis of the Soviet economy, and of its Eastern European captives since they capitulated to communism, has been upon basic heavy industries as demonstrated by the direction of investment and distribution of labor. Investment of new capital in the Soviet Union over the period of the 5-year plans (1929–52) was distributed approximately as follows:

Table 41.—*Gross state investment in fixed capital in the Soviet Union: Cumulative, 1929–52* [1]

	Percent
Heavy industry	64.0
Transport	19.4
Agriculture	9.4
Consumers' goods industries	7.2
Total	100.0

[1] Source: Herman, Leon, Industrial Russia, National Industrial Conference Board, 1953.

Some investment sectors were omitted in the official announcement on which this table is based, but it reflects the primary emphasis put on heavy industry. Within the industrial sector of the economy the ratio in favor of heavy industry has been about 9 to 1 compared with consumers' goods industries. Similarly, about 70 percent of all Soviet industrial workers are employed in heavy industry.

A recent study [78] indicates that the Soviet ratio of investment in these industries (mainly the metal-producing and large metal-consuming industries) compared with total investment in the economy, probably has been considerably more than 1½ times the United States ratio. Kaplan concludes that "the greater rate of increase of industrial output in the Soviet Union has been due, basically, *not* to differences in the Soviet Union-United States rates of investment but rather to differences in the *direction* of investment." [79]

It should be kept in mind throughout this section that the United States, and the western economies generally, have a large "service" element which is not nearly matched in the Soviet scheme. Bias favorable to the Soviet Union may be inadvertently implied through straight comparisons of industrial production because the data released by the Soviet Government, and therefore open to comparison, relate to those sectors of their economy which put it in the best light. Across-the-board comparisons would give proper weight to the large elements of private consumption and services within western economies.

No country of Western Europe has concentrated investment on the heavy industries to such a degree as has the Soviet Union. Rough measures for the United Kingdom and Western Germany, drawn from statistics on gross investment in fixed capital in a recent United Nations study,[80] indicate that these two countries representing Europe's largest investment shares in heavy industry, devoted about 47 percent and 42 percent, respectively, to the heavy sector of their economies in

[78] Kaplan, Norman M., Capital Formation and Allocation, in Soviet Economic Growth, Bergson ed.
[79] Op. cit., p. 80.
[80] U. N., E. C. E. Economic Survey of Europe Since the War, Geneva 1953. Table 26, p. 61.

1951. This was the largest postwar share for either country and, excluding the wartime period, apparently the largest since before the prewar era of stagnation. Nonetheless, it represents only about two-thirds of comparable long-term investment in the Soviet Union. By way of further contrast, in 1951 Germany devoted about 13 percent of her fixed capital investment to transport, about 8 percent to agriculture, and about 37 percent to other uses which include public services and the construction of dwellings. The equivalent proportions in the United Kingdom for the same year were 13 percent, 5 percent, and 35 percent. The comparisons can be only approximate since the underlying definitions are not identical, either for economic sectors or for types of investment.

Trends in industrial production

More accurate comparisons can be made between production figures, which permit inferences regarding the direction of Soviet and East European development. Keeping in mind the *caveat* entered above, regional totals of output in some important extractive and manufacturing industries are shown for 1928 and 1952.

TABLE 42.—*Balance of industrial output, Western Europe and the Soviet bloc, 1928 and 1952* [1]

Metals and manufactures	Unit	1928		1952	
		Western Europe [2]	Soviet bloc [3]	Western Europe [2]	Soviet bloc [3]
Iron ore	Million metric tons	86.6	9.1	101.9	56.0
Steel	do	42.2	9.5	61.8	46.0
Cement	do	23.7	6.6	53.7	24.9
Coal	do	466.3	127.0	473.8	356.0
Electric power	Billion kilowatts	84.2	22.7	292.1	171.9
Petroleum [4]	Million metric tons	2.1	17.3	57.2	56.1
Copper	Thousand metric tons	60	39	90	372
Aluminum	do	110	0.4	412	256
Zinc	do	466	176	607	241
Motor vehicles	Thousands	587	58	1,817	535
Tractors	do	6	4	263	125

[1] Sivard, Ruth. Industrial Expansion in Western and Eastern Europe During the Past 25 Years. Résumé published by United States Information Service, European Service Center, 1954. For data on consumers' goods industries in original, see appendix Va.
[2] Member countries of OEEC, i. e. all non-Communist Europe except Spain and Finland.
[3] U. S. S. R. and the European captive countries.
[4] Includes overseas territories for Western Europe.

In virtually all basic industrial products, Western Europe still outproduces the Soviet bloc, by a substantial margin. The combined output of the Soviet Union and the captive countries ranges from less than 50 percent of Western Europe's production of zinc and cement to 75 percent of Western Europe's production of steel and coal. Western European production of copper, on the other hand, is substantially less than that of the East. The change in these relationships since 1928 reveals, however, that the lead once held by Western Europe has been strikingly reduced. In the following table, these production figures are analyzed in three ways: (1) Total Soviet bloc production is shown as a percentage of Western Europe's aggregate for both years; (2) in terms of percentage change within each region; and (3) in terms of production per capita.

TABLE 43.—*Percentage comparisons in the balance of industrial output, OEEC Europe and the Soviet bloc, 1928 and 1952*

Production	Soviet bloc as percent of Western Europe [1]		Production increases index (1928=100) [1]		Output per capita 1952 [2]		
	1928	1952	Soviet bloc	Western Europe	Unit	Soviet bloc	Western Europe
Iron ore	10	55	615	118	Kilogram	189	365
Steel	23	74	484	146	do	155	222
Cement	28	45	377	227	do	84	192
Coal	27	75	280	102	Tons	1.2	1.7
Electric power	27	59	757	347	Thousand kilowatt-hours.	0.58	1.05
Petroleum (including overseas territories).	824	98	324	2,724	Kilogram	189	205
Copper	65	413	954	150	do	1.25	0.32
Aluminum	(3)	62	(3)	375	do	0.86	1.48
Zinc	38	40	137	130	do	0.81	2.18
Motor vehicles	10	29	922	310	Persons per motor vehicle.	555	153
Tractors	66	48	3,125	4,383	Persons per tractor.	2,376	943

[1] Based on production figures in table 42 and appendix.
[2] Production figures divided by regional population estimates: for Soviet bloc 297 million; for OEEC countries, 279 million.
[3] The change from nearly nonexistent production in 1928 yields a meaningless index. Output in 1952 was 640 times that of 1928.

Of the 11 industries for which data are given, the Soviet bloc raised its volume of output relative to that of Western Europe in all but two. Crude petroleum output did not expand as fast as in the overseas territories of Western Europe, and tractor production was also relatively lower. As already noted, these favorable factors are more than offset by the relative gains in the other basic industries. Gains have also been shown in Soviet bloc production of consumers' goods. The record of the past 25 years seems to indicate that the Eastern European countries and the Soviet Union have reduced the lead formerly held by Western Europe in the heavy industries by about one-half and in the consumers' goods industries by about one-quarter. Relatively greater progress in heavy industrial production within the Soviet bloc confirms its emphasis on expanding industrial capacity.

The second column of table 43 compares the rapidity of change in the two regions. In Western Europe, production of motor vehicles, aluminum, and electric power was expanded more than threefold over the whole period while no other commodity except cement showed more than doubled production; the output of coal barely exceeded that of 1928. The trends in petroleum and tractor production again appear as exceptions to the rule; production of petroleum was 27 times that of 1928 and of tractors almost 44 times as great. While motor-vehicle production has expanded greatly (over nine times) in the Soviet bloc, most of these vehicles are trucks. None of the extractive or metallurgical industries in the Soviet bloc has grown less than three times except coal and zinc. The production of tractors showed the greatest gain, although it fell behind relative to the production of OEEC countries. The rapid pace of industrialization in the Soviet bloc has not been matched by agriculture or industrial consumers' goods production.

Per capita production, as shown in the third column of table 43, similarly shows marked superiority in Western Europe, where a larger aggregate output is divided among a population 6 percent smaller than the total for the Soviet Union and the captive countries. Copper production per capita appears to be the only exception to this Western predominance. The superior proportion of motor vehicles to persons in Western Europe includes a large portion of private passenger vehicles, a factor in living standards which has hardly begun to be approached behind the Iron Curtain.

Steel, however, is the pace setter of modern industrial economies and provides the foundation upon which they rest.

Steel in the Soviet Union

The iron and steel industry of the Soviet Union is located in three main producing areas:

(*a*) Southern, or the Ukraine and the Donetz Basin (Donbas);

(*b*) Eastern, comprising the Urals, Siberia, and the Far Eastern area;

(*c*) Central, or the area adjacent to Moscow.

The Ukraine, because of the proximity of Krivoi Rog iron ore and the Donetz Basin coal center, became the country's traditional production center. Before World War II,[81] over 60 percent of the country's blast-furnace capacity was concentrated in this area. During the war large steel plants, such as Azovstal and Zaporozhstal (both of 1- to 2-million-ton capacity) were almost completely destroyed. Since the war this area's steel industry has been restored. The emphasis upon further development however, has been shifted to the east where output in the 1950's is estimated to be more than double the prewar level. Roughly, equal amounts of pig iron and steel are now produced in the south (some 11 million tons in 1951). Considerable quantities of pig iron are supplied to the steel industry in the central region.

The steel industry in the central region is concentrated mainly around Moscow (Tula, Gorki) and also at Lipetsk and Stalingrad. A smaller center is located in the Leningrad area. Steel furnaces predominate, relying mostly on pig iron from other areas and the relatively plentiful supplies of scrap available locally. This is the densest area of the Soviet Union with respect to manufacturing and population.

The relative contribution of the steel industry in the eastern part of the Soviet Union reportedly rose steadily during the fourth 5-year plan. By 1951 it supplied over 50 percent of the total national output of steel compared to 32 percent in 1940. The steel industry in this region is based on the ore resources of the Urals and on the coking coal in the Kuzbas region. Coal production is also substantial in Karaganda (Kazakhstan) and the Urals, as is the Kuznetsk iron ore production. The largest steel combine of the Soviet Union is located at Magnitogorsk close to iron ore deposits. The plant consists of 6 to 8 blast furnaces (annual capacity about 3 million tons), 30 to 40 open-hearth furnaces (annual capacity 2.5 million tons), and rolling mills.

[81] For the prewar (1938) regional distribution of production and consumption, see appendix table XIV.

Other important iron and steel works in the Urals are located at Serov, Nizhny Tagil, and Zlatoust. The Bakalsk combine at Chelyabinsk is the largest producer of high-grade steels in the Soviet Union. The Stalinsk works (Kuznetsk metallurgical combine) was based originally on exchange of local coal for Magnitogorsk ore but now obtains about two-thirds of its ore from local mines. The largest mill in operation in the Far East is the Amurstal metallurgical works at Komsomolsk, which reportedly has an annual capacity of 600,000 tons of crude steel.

Two other aspects of the Soviet iron and steel industry deserve mention for their special relation to the structure and development of the industry under conditions of central planning. The first is financial and the second is technological, but both had economic repercussions. Since before the first 5-year plan, a policy of price ceilings on industrial products, including steel, has been in force. This policy of subsidizing low prices to metal consumers has continued with brief interruptions to the present day. Reforms have been instituted, at times, to bring the price system in line with opportunity costs, thus making price more closely measure the alternatives sacrificed. The Soviets have continued subsidization, nonetheless, as an element in their program of rapid industrialization.

Before World War II, the optimum size of plant was long undecided. A fetish had been made of copying American technique, but the advice of American experts was not heeded regarding the technical limits imposed by Soviet-ore qualities, low-grade coke, and the use of charcoal among other things. The structure of the American economy was misunderstood, and attempts were made to duplicate some characteristics of the American industry in the totally different Soviet steel market and inadequate transport network. The drive for immense, integrated works became known as Gigantomania and took a long time to be finally set aside in Soviet practice. Clark [82] has summarized the position as the Russian willingness "to ignore or underestimate: (1) the law of diminishing returns, (2) the cost of transportation, and (3) the needs and problems of the steel consumers." The campaign for regional self-sufficiency is intended at least partly to correct the mistakes of (2) but little evidence exists to show that systematic corrections are in force regarding (1) and (3).

The West European pattern

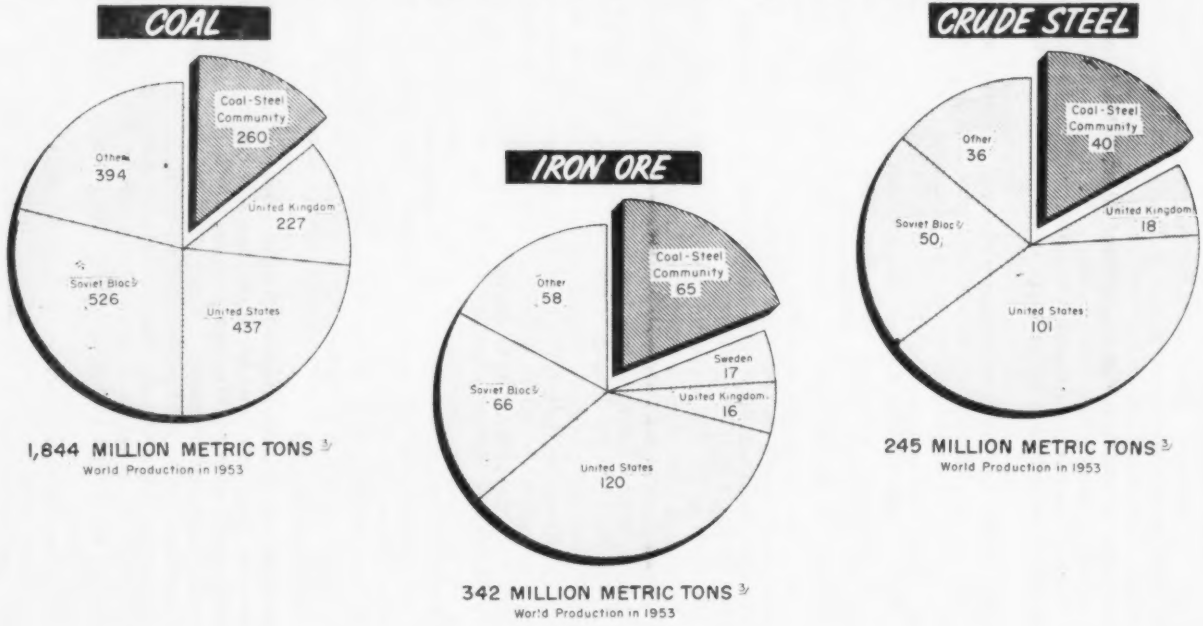
The most important European deposits of iron ore and coal, together with the iron and steel industries based on them, are concentrated in a comparatively small area of Western Europe which cuts across the boundaries of France and Germany. Reserves of ore are concentrated largely in Lorraine and of coal principally in the Ruhr and the Saar regions. In terms of capacity, the steel industry is second only to that of the United States: about 70 million metric tons in 1953 compared to 38 million for the Soviet Union and about 107 million (flow-basis) for the United States.

Chart III indicates the importance of these deposits, now under the six-nation coal and steel pool known as the Schuman plan, in the context of world production including that of the Soviet bloc.

[82] Clark, M. Gardner, Studies in the Soviet Iron and Steel Industry, 1954, unpublished.

CHART III

THE EUROPEAN COAL AND STEEL COMMUNITY IN RELATION TO OTHER MAJOR PRODUCERS OF COAL, IRON ORE, AND STEEL, 1953



1/ Hard coal and lignite in hard coal equivalents.
2/ U.S.S.R. and European satellites.
3/ Estimated.

Statistics and Reports Division
Office of Research, Statistics, and Reports
FOREIGN OPERATIONS ADMINISTRATION
July 30, 1954

None of the countries of the Coal and Steel Community (France, Germany, Italy, and the Benelux nations) is fully self-sufficient in coal, iron ore, or steel. Germany, normally the largest coal and steel producer of the group, imports more than half of its iron ore. France, a large producer of iron ore, imports a third of her coal and half of her coke. Belgium-Luxembourg exports steel but depends upon imports for both iron ore and coke. Italy and the Netherlands are importers of coal, iron ore, and steel.

A common market in the Coal and Steel Community countries was established for coal, iron ore, scrap, and steel in the first half of 1953. The principal measures taken by the high authority of the Coal and Steel Community on its founding were the abolition of double-pricing and price-discrimination generally, the elimination of subsidies on transport of steel and steelmaking raw materials, and the abolition of tariffs and quantitative restrictions between countries of the community. Eventually it is hoped to modernize and rationalize production in all the countries of the community, allowing competition to concentrate production in the low-cost works. Expansion of production is a matter left to the owners in the various countries while the high authority's plans are concentrated on removing obstructions to exchange and, until recently, bottlenecks in the supply of raw materials, especially coking coal and iron ore.

Steel production

The rapid increase in output of the Soviet iron and steel industry is its most striking phenomenon. Overall steel production (in crude steel equivalent) in 1953, as compared with 1929, 1949, and 1952, is shown in table 44. Figures of anticipated production for 1960 are included and should be treated with considerable reserve.[83] The year 1949 was selected for purposes of comparison as a year of high activity before the Korean boom.

For the countries constituting the European Coal and Steel Community (ECSC) there has been little advance over the earliest year shown, and recently a downward trend was indicated. The steel industries in Coal and Steel Community countries showed a decrease when comparing 1952 and 1953, and the expansion which had been progressive since the war came to an end. The short fall between actual and anticipated production was considerable in Federal Germany, France and the Saar, and Belgium and Luxembourg. Unless there is a sharp upward trend in the market in the near future, the attainment of the 1960 planned figures will be difficult. As a result of the slackening of demand for steel in these countries, works are no longer operating at capacity.

In the United Kingdom and the United States there was a steady increase in steel production along with the installation of large new capacities. Anticipated production was reached in the United Kingdom in 1953, but in the United States production was a little below advance estimates. Smaller Western European producers, including the Netherlands, increased their production although the figures planned were not always attained.

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[83] Earlier reference to Western Europe applied to the member countries of OEEC. The discussion is somewhat broadened from this point on to include Spain, Finland, and Yugoslavia among the small producers and consumers.

TABLE 44.—*Production of crude steel, by regions, 1929, 1949, 1952, 1953, and 1960 (planned)*

[Thousand metric tons]

	Actual				Anticipated	
	1929	1949	1952	1953	1953	1960
Western Europe:						
Coal-steel Community [1]	[2] 35,656	28,686	41,816	39,661	46,550	56,000
Other [3]	[2] 12,251	19,664	21,557	[2] 23,067	23,455	28,550
Total	[2] 47,907	48,350	63,373	[2] 62,717	70,005	84,550
Eastern Europe [4]	[2] 5,564	6,976	10,747	[2] 12,350	12,850	16,950
Soviet Union [5]	5,003	23,300	34,500	38,000	38,000	60,000
Total, Soviet bloc	[2] 10,567	30,276	45,247	[2] 50,350	50,850	76,950
Production in Soviet bloc compared with production in Western Europe (percent)	22	63	71	80	73	91
United States	57,336	70,742	84,511	102,000	108,000	117,000
Total West	[2] 105,243	118,092	147,884	[2] 164,717	178,005	201,550
Production in Soviet bloc compared with production in the West (percent)	10	26	30	31	29	38

[1] Includes France, German Federal Republic, Saar, Belgium, Luxembourg, Italy, and the Netherlands.
[2] U. N. Secretariat estimate.
[3] Includes Austria, Denmark, Finland, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and Yugoslavia.
[4] Includes Czechoslovakia, East Germany, Hungary, Poland, and Rumania.
[5] A serious possibility exists that the steel data for 1950 and afterward are not precisely comparable with the earlier figures. In his volume, Minerals: A Key to Soviet Power, D. B. Shimkin has suggested that the discrepancy which was noted between announced production data for 1950 and the 1950 data calculated on the previously established basis may have arisen because the Soviet Government has redefined steel production so as to include iron castings. Shimkin has estimated that production of iron castings in the Soviet Union totaled about 3.5 m. m. t. in 1949 and about 4.0 million in 1950 (op. cit., p. 36); therefore, the steel figures would have to be reduced by those and corresponding amounts for other years to be correct.

Source: U. N., ECE, The European Steel Market in 1953, Geneva, January 1954.

The increase in steel production which has characterized the Soviet Union and East European countries since the end of the war was continued in 1953. On the basis of current reports it would appear that in the Soviet Union, Czechoslovakia, and Yugoslavia (included in Western Europe in table 44) the planned figures are likely to have been attained but that in Poland, East Germany, Hungary, and Rumania, production was slightly below the planned figures.

The chart in the summary chapter on steel demonstrates that crude steel output in the Soviet Union has remained about 40 years behind the United States and leading West European producers over the whole period of growth since 1920.

A potential danger in the presentation of regional comparisons such as these is demonstrated by what would happen if we drop the implicit assumption that present international alinements will continue. Were the United States to stand alone against a Communist world which contained all Europe and the Soviet Union, its 1953 production of 102 million metric tons of crude steel would be outweighed by the Communist 113 million metric tons. Our theoretical capacity (112.7 million metric tons at January 1, 1954) would, however, be equal to that production total. By 1960, ignoring the changes in policy and effort that would obviously take place, our anticipated production of 117 million metric tons would be faced by a combined production of 161.5 million metric tons. That is to say, our production now would equal 90 percent of the combined output of our opponents and in 1960 only 72 percent.

To reverse the imaginary combination of regions, restoration of the captive countries to the status of European countries would give all Europe a present level of 75 million metric tons steel production and in 1960, assuming present plans for heavy industry were retained, a combined capacity of 101.5 million metric tons. On this basis, the Soviet Union alone would now have only 51 percent of all-European output and in 1960 still only 59 percent. The relation of the Soviet Union to a combination of Europe and the United States would be, even more unfavorable to her: a 1953 production equal to 21 percent of the West and still only 27 percent in 1960. Other combinations clearly are possible and more probable than the sweeping realinements imagined, but there is not much point in speculating along these lines.

Production of pig iron and finished steel

In the chain of conversion from ore and fuels to finished steel products, basic iron (pig iron) production precedes the production of steel. The degree to which the production of steel and steel products is dependent upon pig-iron output can be said to vary inversely with the availability of scrap. Its importance in the Soviet Union is measured by comparing the production figures in table 45 with those of table 44 (or reference tables in the appendix). Thus it can be seen that the rates of growth have been closely allied. In the western iron and steel industries, steel production has fluctuated in greater independence of pig-iron output. Shimkin states [84] that the value of pig iron and ferroalloys produced by the Soviet Union in 1937 was 37 percent of the country's entire mineral output excluding precious metals; the corresponding ratio for the United States in the same year was 18 percent.

TABLE 45.—*Production of pig iron and blast-furnace ferroalloys, by regions* [1]

[In million metric tons]

	1936–38	1949	1952	1953 estimate
Western Europe:				
Coal-Steel Community countries	29.4	24.0	34.7	31.5
Other countries	9.2	12.5	14.6	15.2
Total	38.6	36.5	49.3	46.7
Soviet bloc:				
Eastern Europe [2]	2.9	4.1	5.8	7.5
Soviet Union	[3] 14.6	16.6	25.2	27.5
Total	17.5	20.7	31.0	35.0
Production in Soviet bloc compared with production in Western Europe (percent)	45	57	63	75
United States	19.0	49.2	55.8	68.8
Total West (excluding Canada)	57.6	85.7	105.1	115.5
Production in Soviet bloc compared with production in the West (percent)	30	24	29	30

[1] Data for prewar years not available for 1929. The average of 1936–38 has been used as the last period of "normal" production before the outbreak of war.
[2] Excludes Albania and Bulgaria.
[3] 1938.

Sources: Western Europe U. N., ECE, The European Steel Market in 1953 (see appendix table XIV). Eastern Europe, U. N., ECE, Quarterly Bulletin of Steel Statistics for Europe, vol. V, No. 2, June 1954 and for the Soviet Union, Clark, Gardner M., Studies in the Soviet Iron and Steel Industry, his appendix G (see appendix Ve). U. S. A., U. N., Monthly Bulletin of Statistics, July 1954.

[84] Shimkin, D. B., op. cit.

The percentage relationships between the regions surveyed reveal a trend almost the same as that seen to apply for steel. The Soviet Union and the European satellites gained almost as fast in pig-iron production (75 percent of Western Europe's total in 1953), as they did in steel (80 percent in 1953). But again we see that addition of the United States to the Western total lowers the relationship of the East to only around 30 percent of Western output, a relationship that does not seem to have changed much since before the war.

Following the crude-steel stage in the chain of conversion is its modification into usable form. Some are end-use items, such as bars and rails for railroads, while others require further processing, such as wire rods to be drawn into wire and strips, plates or sheets which require shaping before final use. As in crude steel and pig-iron production, the Soviet Union and the captive countries are catching up in output of hot-worked products, having together achieved 76 percent of the Western European total for 1953. Though no total for Western Europe and the United States is shown, the results would be generally the same as for other ferrous products. The inclusion of United States production again would show production in the Soviet bloc to be much smaller, and growing little, if any, faster, than the West.

TABLE 46.—*Production of finished steel, by regions, 1951–53* [1]

[Million metric tons]

	1951	1952	1953
Western Europe [2]	46.2	49.6	49.0
Coal-steel community countries	(29.8)	(32.4)	(31.1)
Soviet bloc	29.8	33.6	37.2
Soviet Union	(23.9)	(26.8)	(29.5)
Captive Europe [3]	(5.9)	(6.8)	(7.7)
Soviet bloc—Western Europe (percent)	64.5	67.7	75.9

[1] Includes hot-worked products consisting of hot-rolled products, steel castings and forgings, and semis for sale. Soviet Union "rolled metal."
[2] 1953 figures include production for last quarter of 1952 and first 3 quarters of 1953.
[3] Excludes Albania and Bulgaria.

Sources: Western Europe, including the ECSC, Economic Survey of Europe in 1953, 1954, Geneva, table XI, Soviet Union, Clark, M. Gardner (see appendix table XIV). Captive countries of Eastern Europe, U. N. Quarterly Bulletin of Steel Statistics for Europe, vol. V, No. 2, June 1954.

Production capacities

In the Soviet Union, the growth of steelmaking capacity has been a prime concern of the planning authorities. Investment since the war, though obscured by the difficulties surrounding interpretation of ruble values, seems to have multiplied almost threefold. Though not all investment goes into equipment, the growth of Soviet manufacture of metallurgical equipment reflects the drive to expand production (see table 47).

TABLE 47.—*Estimated growth of Soviet manufacture of metallurgical equipment, 1928–50 and 1955 (plan)*

Year:	*Tons*	Year—Continued	*Tons*
1927–28	0	1948	91,000
1940	27,800	1950	115,000
1947	46,000	1955 plan	247,000

Source: Clark, Gardner M., Studies in the Soviet Iron and Steel Industry, 1954. Unpublished.

Professor Clark finds a relatively slow increase in the growth of equipment production from 1944 to 1947 which he surmises was partially due to contracting out to capitalist countries. The trade restrictions since imposed probably sparked the doubled output from 1947 to 1948, and the "Russians are now able to equip the rapid expansion of their iron and steel industry without any help from the outside world."

Western Europe has not been idle during the postwar period. The coordination of investments through regional economic organizations has been an important aspect of the efforts to restore and expand production capacity. The OEEC [85] reported that the increase in steel capacity expected over the period 1952–56 and resulting from all the projects submitted by the three main manufacturing countries was:

	Thousand metric tons
Germany	2,430
France	755
United Kingdom	1,608
Total	4,793

i. e., nearly 5 million tons out of a total of 6.2 million tons for all OEEC countries combined.

The European Coal and Steel Community also takes part in coordinating national plans for those industries in which it has a mandate. Investment [86] for the six member countries over the period 1949–52 has been about $1,960 million in coal mining (including the provision of housing for miners) and about $1,570 million in steel works. Provisional production targets for 1957–58 of 47 to 50 million tons of steel and 275 to 285 million tons of coal represent increases of 6 to 8 million tons of steel and of 15 to 35 million tons of coal over the next 4 or 5 years. It is expected that the increase in steel production will come from modernization and rationalization of existing plant. No extensive new installations are planned. There is even some fear that excess capacity already exists for flat products. Coking coal production, including grades of coal not previously regarded as suitable for metallurgical coke, is to be increased by 20 to 22 million tons a year. Capacity of the coking plants is to be increased by 9 to 10 million tons a year, and changes are to be made to permit the use of the new lower grades of coking coal. Extensive modernization of ore mines is to raise production from 65 to 80 million tons a year. These developments are to be matched by increased investment in miners' housing, for which a target of 40,000 new and of 60,000 improved houses has been set.

The extent to which capacity is used in the West depends on the uncertainties of demand. Loss of overseas markets for unfinished steel, cyclical business trends, and the unpredictability of military needs have caused European producers much concern. Coordination of investment and lowering of barriers between European markets have been cited to indicate how the elements of unpredictability are being faced.

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[85] OEEC at Work for Europe. Paris 1954, p. 71.
[86] Data from Driscol, J., Early Days in Schumania. The Journal of Industrial Economics, April 1954.

In the Soviet world the problem is theoretically much simpler. The authorities simply prescribe that capacity will be extended as fast as possible and then be used to its fullest. In practice this has not always worked out.

In the Soviet Union, the use of steelmaking capacity has been handicapped by administrative folly, such as "Gigantomania," and poor technological practices. High furnace heats, badly prepared (though inherently excellent) refractories, ashy cokes, and unskilled workmen limited prewar utilization in Soviet mills. According to Shimkin,[87] 1937 production of pig iron reached only 88 percent of nominal capacity, steel output only 86 percent of capacity, and rolled iron and steel products about 75 percent of capacity. At the end of World War II, the Soviet Union set out to improve its standards of operation in ferrous metallurgy and simultaneously install a large increase in capacity. Extension of existing works was to be the pattern, rather than establishment of large new centers. Though many of the technical improvements were instituted during the fourth 5-year plan, building lagged, and 1950 capacity is estimated to have exceeded that of 1937 by only 10 or 15 percent. For all practical purposes, production in recent years has equaled capacity. Though Soviet nominal capacity is not calculated on the same basis as United States data, our 1953 capacity to produce 113 million metric tons of steel clearly overshadows the Soviet capabilities even should they exceed 1953's production of about 38 million metric tons.

Productivity in the mills has been a long-standing problem in the Soviet Union because of the original lack of an industrial labor force. Lately greater advances have been recorded; perhaps as much as a 31 percent rise in iron and steel output per man between 1940 and 1950.[88] The prewar level was about 52 percent of labor productivity in United States steel mills. Capital equipment productivity is, however, the more significant measure in capital-scarce Russia. The productivity of Soviet blast furnaces and open-hearth furnaces is said to be higher than our own,[89] but the productivity of these furnaces per worker is much less.

Steel consumption

Measures of per capita consumption of steel reflect fairly accurately the stage of industrialization, and to some degree the standard of living, characteristic of the regions to which they apply. In Western Europe per capita consumption in the Coal and Steel Community countries in 1953 stood at 195 kilograms while the other countries consumed 143 kilograms per capita, yielding a Western European average of 169 kilograms per head. In 1953 the captive countries of Eastern Europe, taken as a whole, consumed 141 kilograms per capita which was much below the Soviet figure of 187 kilograms, partly due to Soviet imports from the captive countries. The Soviet bloc average was about 171 kilograms per capita. None of these apparent consumption averages comes near the United States standard of 634 kilograms per capita consumed. Sweden and the United Kingdom came closest with levels of 306 and 323 kilograms, respectively, in 1953.

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[87] Shimkin, D. B., Minerals: A Key to Soviet Power, Harvard University Press, 1953, especially pp. 37–38.
[88] Galenson, Walter, Industrial Labor Productivity in Soviet Economic Growth. Bergson, edition.
[89] Clark, M. Gardner, op. cit., pp. 223–224.

During a period of almost a quarter of a century, proportionately the most rapid rate of increase has been in the Soviet Union. Table 48 compares apparent consumption in 1953 in actual tonnages and per capita to the 1929 standard for the same groups of countries used earlier.

TABLE 48.—*Indexes of apparent consumption of steel; European Coal and Steel Community, other West Europe, Eastern Europe, Soviet Union, and the United States, 1929 and 1953*

[Index: 1929=100]

Country	Apparent consumption		
	Actual tonnages	Per capita	Production
Independent Europe:			
Coal-Steel communities	129	109	111
Others	181	150	188
Total	147	124	131
Soviet bloc:			
Captive countries	212	202	222
Soviet Union	718	614	760
United States	191	146	178

Source: U. N., ECE, The European Steel Market in 1953, Geneva, January 1954 (see appendix table XIV).

It should be remembered that the level of steel production and consumption in the Soviet Union at the beginning of this period was extremely low, and steel consumption per head is still considerably less than in the major producing countries of Western Europe. As can be seen from the chart in the summary chapter on steel production (which can be considered as a fairly good guide to the trend of consumption over a long period), consumption has increased in the Soviet Union only slightly faster during this period than was the case in Western Europe and the United States during a comparable period of rapid industrial expansion. On the other hand, the proportion of steel output which the Soviets can devote to governmental purposes will probably remain much higher than in the West where consumers' durable goods take a large fraction of output even during time of war. The classic case of Japan during World War II shows that governmental control of even a small steel industry can offset, at least temporarily, a much larger industry in countries where private consumption tends to retain its importance.

It has been and continues to be characteristic of the Soviet industry that other heavy industries predominate among its customers; the railroads, construction, the oil-producing and transporting concerns and the machine-building industry. The bulk of ordinary rolled steel is consumed by the transport and construction branches while the so-called quality grade is devoted almost entirely to the manufacture of machinery and munitions.

One other important aspect of Soviet steel consumption trends is the change from that of heavy importer before World War II to that of self-sufficiency or even slight net exporter. This change was especially pronounced for the ferroalloys. Electric ferroalloys are produced to fill Soviet needs for high grades, but considerable dependence is placed on ferroalloys from blast furnaces (mostly low-grade

ferrosilicons and ferromanganese) for ordinary purposes. The ratio of imports to consumption of all ferroalloys fell from 97 percent in 1929–30 to 46 percent by 1932, 14 percent by 1934, and only 2 percent by 1936. Trade between the Soviet Union and captive countries is more fully treated elsewhere and the question of prospective trade trends is also discussed there.

Consumption and demand form the core of the set of problems faced by European producers. The loss of overseas markets has been mentioned. East-West trade is not at present of major quantitative significance, although there seem to be signs of a slight, probably temporary, increase. Considerable concern is felt over the obstacles to growth of domestic demand for steel, although it is felt that establishment of the common market of ECSC and the moves toward rationalization of the price structure are constructive steps toward the removal of these obstacles. Essentially, the solution of the problem seems to lie in the matching of capacity to produce with prospective demand. In 1949 an ECE study was made which forecast that capacity would exceed demand by 8 or 9 million tons by 1953. Comparison of the planned and actual production figures in table 44 indicates that the expectation was not far wrong. Now, fortunately, there is a prospect of growing investment coordination among steel producers through ECSC. The High Authority is subject to a limitation of power, however, in that there is little it can do itself to stimulate demand for steel by the steel-consuming industries. Though the data available for steel consumption by end use is not complete or detailed, it does appear that in the long run the outlook for increasing indirect steel exports, and therefore consumption, is much better than for direct steel exports.

Reserves of raw materials

During the period immediately following the war, steel production in both Western and Eastern Europe was hampered by scarcity of raw materials. The scarcity of coke led to shifts in raw-material consumption, so that more scrap and less coke and ore had to be used per ton of steel than before the war. A number of countries which produce neither ore nor coking coal installed or enlarged steel industries. They, therefore, ceased to be exporters of scrap and even became importers. The situation was somewhat aggravated by United States imports of European scrap. A pronounced shift to iron ore dependence was expected in view of what was thought to be a permanent condition of scrap shortage. This would have meant higher requirements for coke.

In brief, the postwar shortages of raw materials in Western Europe are a thing of the past. Rich ore supplies, particularly from Sweden, have recently been greater than consumption. The lean ores are under the immediate control of the producers, and no difficulty of supply seems to exist. Coke supplies have also recently been sufficient to meet demand, although the drop in production of pig iron from 1952 to 1953 contributed part of the easing of the situation. Most kinds of scrap are plentiful, even to allow some increase in exports, but the pig-iron-to-scrap ratio of West European furnaces has been changing as a result of the predictions of permanent scrap shortage.

There are large reserves of iron ore distributed over many countries but European mining, measured in metal content, has remained virtually constant over the last four decades. Output of the rich Swedish ore is increasing, although rather slowly, and so is the mining of very lean ores in Federal Germany. In most other countries production is about the same as, or below, the prewar level. The long-term decline in production of rich Spanish ores has been particularly great. This, together with the decline in production in the "minette" region of France and Luxembourg, caused postwar qualms concerning ore supplies. As mentioned, the threat of an iron-ore bottleneck in European steelmaking has passed and the industry's problems now revolve around sufficiency of demand.

The ore shortage is permanently acute in Eastern Europe, and raw materials requirement since the exhaustion of war scrap depends mainly on ore imports from the Ukraine and Sweden. Table 49 indicates comparative degrees of self-sufficiency for iron ore for selected years.

TABLE 49.—*Production of iron ore (metal content) as percentage of crude steel output, by regions, 1929, 1937, and 1951*

Area	1929	1937	1951
Western Europe	77	68	59
Eastern Europe	19	19	16
Soviet Union	88	85	81
United States	65	71	62

Source: U. N., ECE, Economic Survey of Europe Since the War, Geneva, 1953, table 75.

Western Europe showed a declining degree of self-sufficiency up to 1951 which has been partly met by increased production, partly by improved supplies of scrap and a residual made up by increasing ore imports, including those from European overseas territories. The United States, facing depletion of high-grade ore in the great Mesabi Range, has access to rich Canadian deposits and is opening new overseas deposits as well. The Soviet Union is most nearly self-reliant for ore but is least well supplied with scrap among the big producers.

Probable iron-ore reserves in the Soviet Union have been estimated at 4,500 million metric tons, 3,100 million tons of which are in the eastern region (1,700 million in the Krivoi Rog region and 1,400 million in Kerch) and the remainder, 1,400 million tons, in the Soviet Far East.

Krivoi Rog, in the Ukrainian S. S. R., is the source of one of the most important deposits, not only because of the quality of its ore but also by virtue of its location in the neighborhood of the Donetz coal basin. Martite, magnesite, red and brown ore are the principal types of rich ore found in the deposit. Martite, which represents 75 percent of the production, averages about 63 percent iron content. Krivoi Rog produced 54 percent or more of the Soviet output in 1940 and is still the main source of ore. It provided the basic ore supply for the south and supplementary supplies for the central region as well as supplying almost all prewar exports. The same is true of present exports, and it now must provide for the satellite mills in Eastern

Europe as well. The progressive worsening of Krivoi Rog ore has been a compelling reason to prospect and develop new iron and steel centers outside of the south. Local ores are being increasingly substituted in other areas, and Soviet technicians are doing intensive work to lower costs and improve quality under the handicaps of poorer local ores and increasingly diminished supplies of good coking coal.

The Kerch deposit in the Crimea contains mainly limonite with from 38 to 43 percent iron content. Production amounted to 800,000 metric tons in 1938, or 2.9 percent of the country's total output. The mines suffered great damage during the war but have apparently been rehabilitated, and now exceed their prewar output.

Another important producer is the principal deposit of the Ural basin at Mount Magnitnaya (Magnitogorsk). The ore, mainly magnetite, contains about 56 percent iron. The 1938 production in the Urals was about 7.9 million tons, or 29.2 percent of the total. With the development of steel production in the east of the Soviet Union, mining in this region increased considerably, and production of pig iron reached 44 percent of total production in 1951.

Although averages of iron content for numerous deposits which vary widely in the makeup of their ore may be somewhat misleading, a comparison between the producer nations of this survey will give a rough idea of the relative richness of home supplies.

TABLE 50.—*Metal content of home-produced iron ore (percent iron)*

France	32–34	Spain	48
Sweden	61	Czechoslovakia	34
United Kingdom	30	Soviet Union	45–65
Western Germany	27–30	United States	50
Luxembourg	30		

Source: United Nations Economic Commission for Europe, Economic Survey of Europe Since the War, Geneva, 1953.

The Soviet Union appears to have richer deposits than any other producer. This is at least partly because the richest deposits have been utilized until recently and, therefore, have entered technical literature. It is known that the Soviet Union is using more and more poor ore.

It should be noted that the Soviet Union claims enormous iron-ore resources, but that actual measured and usable reserves, while large, are a small fraction of these claims. The poverty of Eastern Europe in known reserves of iron ore stands in strong contrast to the greater resources of Manchuria and North Korea on the other side of the Soviet orbit. The Soviet Union has plans parallel to those of the United States for extension and development of further ore supplies. Our producers have the advantage of comparatively cheap long hauls by water from the new ore fields in Labrador, Liberia, and Venezuela while the Soviet ironmasters must contend not only with overland haulage but the typical separation by great distance between Russian ore and coal.

The Soviet Union is one of the most important producers of manganese ore and accounted for 52 percent of total world production before the war. Output was estimated at 3.9 million tons in 1950 and 4.6 million tons in 1951. A greater proportion of manganese is consumed per ton of iron produced in the Soviet Union than elsewhere.

It serves both as a substitute for the more expensive hardening elements and is used also to counteract the high sulfur content of coke in the blast-furnace charge.

Because the nation is industrially young, the Soviet steel industry ordinarily consumes relatively little scrap. It lacks a large supply of obsolete capital equipment, which in the United States provides about half the scrap consumed by the steel industry. In the Soviet Union the corresponding share is closer to one-fifth. The captive countries, making some reservation for Czechoslovakia's established manufacturing industries, have even smaller sources of domestic scrap. Furthermore, none of these countries has the highly developed system of collection and marketing for scrap which is integral to the United States industry. The United States, the United Kingdom, and Germany all have in the neighborhood of four times as big a scrap fund in relation to the demand for it as does the Soviet Union.

The outlook

No area included in the survey seems in danger of exhausting the supplies on which it depends for iron and steel production. The problem is rather that of going continually farther afield from existing centers of production to find them.

The producing countries of the NATO alliance will together maintain a sizable lead in capacity to produce iron and steel in the foreseeable future. They have the plant, the ability continually to improve it and to expand it more or less at will, the reserves of material, and trained labor forces to meet most possible future demands. The producers of Western Europe face the problems of falling demand since fundamental postwar reconstruction has been completed while overseas markets have lost their former significance. Excess capacity for steel, and especially for flat products, is thought by some already to exist. United States critiques also center on the problem of demand with considerable attention paid to the role of Government spending.

In Europe, the creation of the Coal and Steel Community has led to a common market, and a move has been made toward the rationalization of the general price structure. Moreover, there is a prospect of growing investment coordination among steel producers. The ECSC can do little, however, to stimulate demand for steel by the steel-consuming industries. East-West trade is not of major significance although there are signs of a slight increase. In the long run, the outlook for increasing indirect steel exports is much better than for direct steel exports. Thus, the home steel-consuming industries must be encouraged to provide a stable and expanding market for European steel.

In the Soviet Union, the present trend in steel ingot production should make possible the fulfillment of the 1955 plan and the Stalin goal, now usually described as the aim for 1960.[90] Continued high investment is to be expected but continued expansion depends to a large extent on improved ore preparation and flow of raw materials. There are other needs which revolve about the problems of blast furnace and steel furnace productivity per worker. Attainment of Soviet goals

[90] Clark, M. Gardner, op. cit.

depends also on education and training of personnel as well as the volume of capital resources allocated for investment in the iron and steel industry. Discovery and development of new deposits will be required to offset the worsening quality of Soviet coking coal and iron ore supplies.

It seems that the long-run prospects for continued rapid expansion of the Soviet industrial labor force are good. It has been suggested that if the need arose, the Soviet Union might be able to draw on the unlimited labor supply of its Chinese allies. The input of capital per unit of output seems bound to increase given the necessity to resort to continually lower grade and more widely dispersed raw materials. This, with other factors, will tend to bring about the economic phenomenon usually following a period of rapid growth in any industry, flattening of the production curve. The levels at which iron and steel production will flatten out in countries with rapidly growing industries is not foreseeable but there seems no reason to doubt continued Western supremacy as long as the United States maintains its economic dynamism.

E. Power Resources

Energy consumption (excluding animate energy and bunker fuels) in all of Europe in 1950 amounted to about one-fourth the total used by the whole world. The Soviet Union in the same year used about one-eighth the world total and the United States and Canada together accounted for about two-fifths of the world total. In terms of coal equivalent, energy consumption in Europe in that year was 840 million tons. In the Soviet Union it was 396 million tons, and in North America 1.3 billion tons. On a per capita basis it amounted to 2.14 tons per person in Europe; 1.98 tons in the Soviet Union, and 8 tons in the United States and Canada. Per capita consumption of energy from commercial sources (see table 51) is somewhat lower, particularly in the areas less industrially developed.

Total energy available in captive Europe, both before and since the war, has been about one-third that available in independent Europe. With the Soviet Union supply added, the eastern bloc had about three-fourths as much as independent Europe. Coal has been, and continues to be, the major source of power in all areas under discussion. The importance of petroleum and natural gas in the United States and Canada has been unequaled elsewhere (table 51).

Even the electricity produced was predominantly dependent on thermal rather than hydro sources, and coal was by far the most important powerplant fuel (table 52).

Fuels, with the exception of petroleum, do not play much of a direct role in interregional trade. In 1950, imports accounted for only 8.4 percent of all fuel and power consumed in Europe, 4.6 percent in northern America, and 3 percent in the Soviet Union.

TABLE 51.—*Sources of commercial energy, by regions, 1937 and 1950*

[Million metric tons coal equivalent]

	Coal and lignite		Petroleum		Natural gas		Hydroelectricity		Total	
	1937	1950	1937	1950	1937	1950	1937	1950	1937	1950
Western and Mediterranean Europe	480	478	1	5	...	1	30	63	524	547
Captive Europe	156	167	11	8	4	3	1	2	172	180
Other Europe	2	5	...	...	...	...	2	3	4	8
Soviet Union	133	232	38	49	2	[1] 11	4	6	177	299
United States	449	502	239	369	93	237	31	58	812	1,166

[1] This estimate, from Guyol, N. B., Population and Energy Resources, U. N. Processed Paper E/Conf. 13/282, meeting No. 20, 54–18361A, p. 6, has been questioned as being too high.

Source: Largely arranged from tables appearing in World Energy Supplies in Selected Years, 1929–50, United Nations Statistical Papers Series J, No. 1 (New York), September 1952.

Looking forward, one student [91] of the energy problem has pointed out that during the period 1860–1910, world energy consumption expanded, with remarkable consistency, at the rate of 4.5 percent per annum. Between 1910 and 1950 the rate of increase declined to only 2 percent per annum. Allowing for an intermediate rate of increase, together with some other assumptions which seem reasonable, it is estimated that energy requirements in 1980 would be about as follows (in million tons coal equivalent): Europe, 2,080; Soviet Union, 1,150; Northern America, 3,570; others have regarded these estimates, particularly that for Europe, as too high. Projections published by the Paley Commission indicate an energy consumption in Western Europe in 1975 of 950,000,000 metric tons, coal equivalent. (See the President's Materials Policy Commission, vol. III, 1952, pp. 29–30.)

With regard to problems peculiar to Europe, he says:

In *Europe* for example, a serious potential problem of energy supply is indicated by the difficulties experienced during the postwar period in meeting even current energy requirements. With requirements at the 2 billion ton level foreseen in 1980, these problems would be vastly increased. For although Europe can increase its output of lignite, waterpower, natural gas and even noncommercial fuels, supplies of energy from all these sources combined are not likely to exceed 400 to 500 million tons coal equivalent per annum. Even if consumption of oil should rise to 400 million tons per annum (equivalent to 600 million tons of coal) about a billion tons of coal would still be needed to satisfy the balance of Europe's energy requirements.

There is some question as to whether so large a quantity of coal could be obtained economically. Europe is already experiencing serious difficulty in trying to cover its coal requirements at the 600 million ton level, even though its coal resources are large. And costs of coal production, already high, may be expected to increase as mines deepen and wages rise.[92]

Not only heavy industry, but also, transportation and the production of consumer goods depends, directly or indirectly, upon inanimate energy. It may not be so commonly appreciated that much of the greater productive efficiency being sought in many agricultural economies is closely tied to gasoline and fuel oil and that much of the better life and greater productivity that is coming slowly to rural villages is dependent on electricity.

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[91] Guyol, N. B., Population and Energy Resources, Processed Paper E/Conf. 13/282 Meeting No. 20, 54–18361A.
[92] Ibid., p. 18.

Whether the planned development of industry in the captive countries of Eastern Europe can be achieved depends much on fuel and power resources of this area. These resources must provide the energy for local development as well as meet the export quotas to the Soviet Union.

Theoretically, a large increase in the output of fuel and power is feasible. The mid-European captive area possesses considerable wealth in sources of fuel and power, a great part of which has not been fully exploited. Among these resources, the great Silesian coal field, now shared by Poland and Czechoslovakia, with its reserves equal to, if not larger than, those of the Ruhr Basin in Germany, is undoubtedly the most important. The area also possesses enormous reserves of lignite in Eastern Germany and Bohemia, petroleum in Rumania, Albania, and the Soviet Zone of Austria, and considerable waterpower in the basin of the Danube, the Vistula, and the Balkan Rivers. Because of its coal, lignite and waterpower, the area is already producing much electric power and is capable of producing in the near future twice or even three times as much, thus reaching the Western European level of production.

Practically, however, the implementation of the vast program is meeting with many difficulties and will meet with more in the future.[93]

Relevant to this major problem of whether the usual sources will be developed rapidly enough to meet emerging demands is the question of whether applications of atomic power in the industrial field may soon make the above considerations of other fuels and energy more or less moot. At present there can be no satisfactory answer to this imponderable, only guesses and forecasts based, very probably, on inadequate information. For what it may be worth, geological evidence, direct and postulated on general but basic stratigraphic and mineralogical knowledge, indicates that the probable basic atomic resources are more abundant, perhaps much more abundant, in the free world. Another bit of information suggests that the present program is moving forward more rapidly in the free world. In the United States in 1953 some 30 billion kilowatt-hours of electric power were utilized by the AEC—an amount which would have been equivalent, roughly, to one-fourth of all the electric power available in the Soviet Union in that year.

1. PETROLEUM AND NATURAL GAS

In recent years petroleum has been the most versatile, and most sought after, of the fuel resources. Western and Mediterranean Europe have almost no producing petroleum resources. To be sure, a recent discovery in the Landes area in the southwestern part of France involved a gusher producing about 3,800 barrels per day, which has increased the total production of France by more than 50 percent.[94] Thus independent Europe must seemingly depend upon imports for the indefinite future. In 1953 they are indicated as controlling the production of 95 million tons overseas. Such control, however, considering the major source area, is uncertain in times of international tension. (See pt. III: Staff Paper L—Petroleum and the Middle East.)

The Soviet Union, on the other hand, is the third largest petroleum producer in the world today. Production of petroleum by the Soviet

[93] Wszelaki, Jan. H., Fuel and Power in Captive Middle Europe. Mid-European Studies Center. National Committee for a Free Europe, Inc., New York City, 1952, p. 12.
[94] Business Week, September 18, 1954, p. 174.

bloc is estimated at about 52 million tons in 1953 and under the current 5-year plan is supposed to reach 70 million at the end of 1955.[95] In recent years the Soviet Union has been again an exporter of crude petroleum; 1 million tons in 1952, 2 million in 1953, and an estimated 4 million tons in 1954. The total, however, is still below the 6 million tons peak of 1932. Recipients of the recent exports were not only northwestern and southern Europe but also India and Argentina. Soviet oil has gone largely to markets other than those in which other exporters are already well established. There is some question whether such sales were of other than a temporary nature and for the same reason that gold, chrome, manganese, etc., were exported—to pay for essential imports.[96]

Nevertheless, the oil and gas industry of the Soviet Union apparently retains some important elements of weakness. These are in the nature of inadequate technology, as regards exploration, drilling, operation, refining, and transport, rather than a paucity of resources. Ascertained and developed reserves are small in relation to the possibility of reserves in excess of 100 billion barrels suggested by broad geological considerations. The developed areas are not too well located with respect to domestic areas which consume most of the product. In this connection reports that the important Baku development is showing some signs of exhaustion may be significant. The Caucasus, Trans-Caspian and Sakhalin areas provide more than 80 percent of the total which for 1953 was estimated [97] at 49.2 million metric tons or about 15 percent of recent United States output. Natural gas production was insignificant in comparison with levels of output in the United States.

Within this framework, recent happenings regarding the development and exploitation of petroleum production in the captive countries of Eastern Europe are significant.

A 5-year concession to Eurogasco (an affiliate of Standard Oil of New Jersey) by the Hungarian Government led to the discovery in 1937 of the first commercial petroleum field at Lispe. In 1940 a second field was discovered at Lovazzi and self-sufficiency was soon achieved. By 1943 output was 838,000 tons of crude compared with a controlled consumption of about 380,000 tons, crude equivalent. Thus the Hungarian oil industry in the 1940's became one of the few in oil-poor Europe with an exportable surplus.[98]

In 1950 it was indicated that the part of Austria held by the Soviet Union was producing about 900,000 metric tons of petroleum per year, about half of it exported. The goal was at least as high as the 1,200,000 tons produced by the Nazis in 1944. Deep borings had been increased from 7 to 35 in the main field (Zistersdorf) which was believed to have reserves of as much as 10 million tons.[99] Trial wells, some of them productive or promising, had been put down in several other areas.

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[95] The Times (London), April 5, 1954, p. 7. See also the New York Times, August 30, 1953, p. 3F, and the Christian Science Monitor, March 27, 1954.

[96] See especially Shimkin, Demitri B., Minerals—A Key to Soviet Power, ch. VII, Petroleum, Natural Gas, and Asphalt, pp. 195–218, Harvard, 1953.

[97] Shimkin, Demitri B., Material Resources of the U. S. S. R. Industrial College of the Armed Forces, L54–113, 1953–54, p. 7.

[98] See especially The Hungarian Oil Industry, Mid-European Studies Center Publication No. 15, National Committee for a Free Europe, Inc., 1954, 106 pages.

[99] Christian Science Monitor, June 20, 1950, p. 3.

When the Communists took over the Rumanian petroleum industry in 1947, production was about 3,810,000 tons per year as compared with a peak production of 8,600,000 metric tons in 1936. In 1950, after reorganization of the Mines and Petroleum Ministry, Rumanian petroleum production was indicated as lagging, with the goal only 95 percent fulfilled.[1] The blame was put largely on prospecting and exploration, i. e., new producing wells had not been brought in rapidly enough. So, late in August of that year, gasoline was rationed for the first time in the country's history. Nevertheless, in 1951 it was officially reported that the Anglo-Iranian Oil Co. bought 200,000 tons of fuel oil from Rumania.[2]

The 1951 Rumanian goal for petroleum production was announced as fulfilled to 103.3 percent of the goal. Some informed guesses were to the effect that fields near Buxnan, Roman, and Focsani (and some fields newly tapped) were producing nearly 8 million tons of oil a year, much of which was being sent to the Soviet Union.[3]

It was planned that in 1952 Rumania would reach the top level of crude oil extraction obtained before the war and during the following years would greatly exceed this level.[4] It was estimated that production in 1953 may well have been as much as 8,600,000 tons and the regime hoped by 1955 to have a production of 10 million tons per year.[5] Such a goal was considered to be a feasible one by many Western petroleum experts. Exploration for new wells was reported as moderately successful. Nevertheless, gasoline continued to be strictly rationed and it was estimated that much of the product was supplied to the Soviet Union, or to other captive nations. Still later, the expected output in 1953 was set at 9,300,000 metric tons and the planned output for 1955 at 11 million tons.[6]

2. ELECTRIC POWER

Electricity has so many desirable characteristics as a source of power and light that it is used increasingly. Europe was served by nearly 300 billion kilowatt-hours in 1950, the Soviet Union by about 90 billion kilowatt-hours and the United States by over 329 billion kilowatt-hours. Western and Mediterranean Europe in that year produced nearly 240 billion kilowatt-hours; captive Europe only about one-sixth as much. In 1953, electric power generated was (in billions of kilowatt-hours: United States, 513; Western Europe, 302; Soviet Union, 133; captive Europe, 60. Understandably, Eastern Europe has been described as an area which has been underinvested in facilities for electric energy.[7] Though world production of electricity increased an average of 6 percent per annum for the period 1929–50, the ratio of increase in Europe, already one of the more electrified areas by 1929, was slower. Meanwhile, in the Soviet Union output of electricity increased thirteenfold, from, of course a comparatively low starting base. Growth between 1937 and 1950 was substantial but less spectacular.

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[1] Christian Science Monitor, October 2, 1950, p. 19.
[2] Wall Street Journal, September 21, 1951, p. 3.
[3] New York Times, January 3, 1952, p. 80.
[4] New York Times, January 3, 1951, p. 75.
[5] Christian Science Monitor, September 2, 1953.
[6] New York Times, September 9, 1953, p. 13.
[7] Wszelaki, op. cit., p. 37.

Such dependence as a particular country may put on hydro sources rather than thermal sources appears to be related primarily to the question of the comparative availability of favorable hydro sources versus abundance of bituminous coal or lignite. Countries such as Norway, Switzerland, Italy, and France make significant use of water-power, whereas the United Kingdom, Poland, East Germany, and the Netherlands depend largely on thermal sources. Even so, some of the countries have substantial hydro sources which, during the prewar period were developed to a moderate degree only (table 54). That development has proceeded with some rapidity in the postwar period, as in Norway. It is clear, too, that the Danube area presents much hydro potential, estimated as high as 17 million kilowatts, excluding the portions in Germany and Austria as yet only slightly used. In the East, most if not all of the plans call for increased power-generating capacity. In Rumania, for example, the total electric power generating capacity, indicated at 1,050,000 kilowatts in 1953, was to be boosted to 1,380,000 kilowatts in 1955.[8] Over all it is planned that captive Europe will produce about 82 billion kilowatt-hours by about 1955, a level for the total area which compares favorably with the United Kingdom and Western Germany, but is well below the Soviet Union.[9]

An examination of the Soviet statistics in table 54 suggests that with a hydro potential substantially larger than that of either all of Europe or northern America, the potential nevertheless has been only slightly harnessed. Thermal sources appear to be not only more used, but also to have been more rapidly expanded as compared with prewar. This is no doubt in considerable degree a matter of location, but may also be related to the difficulties of planning and erecting on schedule, a major engineering project such as the giant Kuibyshev hydroelectric station on the Volga, first announced in 1950 for completion in 1955. It would, as announced, have a 2 million kilowatt capacity to provide 10 billion kilowatt-hours of electricity annually, some of it to be transmitted as far as Moscow. The difficulties mentioned[10] appear to be technological and administrative, but also involved may well be the adequacy with which the capital goods industries of the country can provide the necessary machinery and other equipment.

In any case, some shortage of electric power seems to be one of the woes besetting captive Europe, in spite of the substantial potential hydro resources as yet undeveloped. Apparently this shortage is fundamental to some of the evident lag in industrial production as well as basic to consumer rationing. There is even a minor note to the effect that the old power systems are wearing out before new ones can be built to replace them.[11]

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[8] New York Times, September 9, 1953, p. 13.
[9] Wszelaki, op. cit., p. 41.
[10] New York Times, September 26, 1954.
[11] Raymond, Jack, New York Times, September 25, 1954.

3. COAL

Important though petroleum is in the modern Western World, Europe as a whole produces less than 2 percent of the world's crude oil and consumes about 11 percent of the total. On coal the story is strikingly different; Western Europe produces about one-third of the world's total, North America nearly as large a share, and the Soviet Union, together with its captive countries, about one-fourth of the world's total. By 1953, Western Europe still produced about one-third of the total, the Soviet bloc had increased to one-third, and North America had declined to about one-fourth of the world's total. As regards trends, production in independent Europe appears to be moderately stabilized. That of the Soviet Union, with or without its captives, is still trending upward. North America, though sharply higher during the war years, has returned to approximately the prewar level of production. The near stabilization of production in independent Europe at this time appears to be undesirable inasmuch as there is in the OEEC countries a difference of about 35 million tons between coal available from their own resources and what they need for current consumption and stocking. The gap remaining in 1956 has been estimated at 25 million to 35 million tons.[12] Perhaps the most disappointing aspect of the matter is the recurring failure to reach targets set for production. Filling the gap with foreign coal, or in larger part, with imported petroleum products is not without its disadvantages. Present price advantages may be temporary and supplies apparently must largely come from the uneasy Middle East (see Part Three: Staff Paper L—Petroleum and the Middle East).

a. The United Kingdom

The coal mines of the United Kingdom after much postwar attention have not quite reached what might be called an average prewar level. Production is some 6 or 7 percent below the good year of 1937. Preliminary figures on 1954 production indicate an increase of less than 300,000 tons over that of 1953 in spite of an agreement a year ago between the Coal Board and the Mineworkers Union that an increase of about 5 million tons was a reasonable minimum aim for the year. Estimated production by 1956 still will fall several million tons below the 1937 level. The deficit has been a continuing one and a serious matter on at least two scores:

1. Coal was the one major natural resource possessed in sufficient abundance to have served an active export demand and so contribute substantially to foreign exchange, if only it could have been gotten out of the ground in large excess of domestic needs.

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[12] OEEC, Coal and European Economic Expansion, Paris, January 1952, p. 9.

TABLE 52.—*Summary data on coal, by regions, 1951, 1952, 1953*

[Million metric tons]

	Western Europe	Eastern Europe and the Soviet Union	North America
1951:			
Production	471.8	326.0	534.7
Imports	68.7	17.3	24.8
Exports	35.1	28.0	57.4
Net imports	33.6	−10.7	−32.6
Gross consumption	503.2	315.3	501.0
1952:			
Production	483.7	340.1	469.5
Imports	64.7	19.8	22.7
Exports	37.9	27.8	47.8
Net imports	26.8	−8.0	−25.1
Gross consumption	502.6	332.1	451.6
1953 (provisional):			
Production	479.0	361.0	447.0
Imports	58.0	22.0	20.0
Exports	45.0	29.0	33.0
Net imports	13.0	−7.0	−13.0
Gross consumption	490.0	354.0	445.0

Source: United Nations, Monthly Bulletin of Statistics, March 1954, table 1, p. xi.

2. Its relative scarcity appears to have set some limits on the postwar industrial recovery and expansion of the United Kingdom in spite of considerable increase in efficiency of use of fuel, increased imports, particularly of petroleum, and reduction in coal exports. The tight situation appears to be still with them:

> * * * In the last 5 years industrial output has risen by more than 20 percent, while coal output has risen by less than 9 percent. Industry, including gas and electricity, increased its consumption (coal) by only 11 percent, while the railways have cut their consumption by a million tons a year; supplies to other consumers have been broadly unchanged. Over the 5 years, fluctuations from the general trend have been taken care of by using stocks of coal and varying exports and imports. But stocks offer smaller margins this winter; the surplus coal saved in 1952–53 has by now mainly been used up.[13]

Whether British coal production over the next 10 years will outrun demand obviously depends in part on price, indeed somewhat on competitive prices with, for example, petroleum imports. The figure 250 million tons has been mentioned as the probable demand in 1960–65. Most of the production would continue to be deep-mined coal rather than opencast. In 1953, 30 million tons, of a total of 212,500,000 tons of deep-mined coal, were produced at a loss in relation to the fixed selling price.

The labor factor is more subject to variable programing under heroic methods than might at first be thought possible. Between the beginning of 1949 and the end of 1950 manpower in the British coal mines declined by about 40,000, but in 1951 and 1952 manpower rose by about 35,000. In 1953 there was a decline of 10,000 miners on colliery books, mainly not face workers. An advance in miners' wages in 1954 apparently procured almost none of the hoped for increase in production of 5 million tons for the year.

The question of organization of the United Kingdom coal industry, including nationalization, is of great significance. Beginning with 1952 there has been increased capital investment looking toward increased future production, not only by further mechanization but also

[13] Coal and the Boom, the Economist, London, September 4, 1954, p. 756.

the laying out of new works and opening facilities so as to utilize more men. Some £200 million has been invested in the mines by the Board since nationalization. An average of £38 million per year for the period through 1955 was proposed. In 1953 the industry invested £64,300,000 on capital account, of which £52 million went into collieries, £5 million into coke ovens, and £7 million on other works. In addition, £17 million was spent on new housing programs for miners.[14] Even this was considered inadequate. Granting that part of the present program will not be effective until later, it appeared that in 1954 production was lagging sufficiently so that the United Kingdom must either increase coal imports, cut back on coal exports, or fall short of its industrial needs. The latter would appear to be particularly undesirable, for industry had increased its production by 7½ percent on the basis of a 5-percent increase in coal consumption.[15]

b. The Ruhr

In the prewar period the Ruhr district was the most important coal field in Europe, and second in the world only to the Pittsburgh area in the United States. It produced more than 10 million tons per month, 3 times as much as France, and more than the entire production of the Soviet Union. Powerwise, it was more productive than all the hydroelectric installations in the world. Not only the abundance but the variety and general high quality of its product was notable. Thick and numerous coal seams plus favorable location in relation to the workshops of Europe were and are highly advantageous. Reserves are very great—proved commercial reserves at less than 4,000 feet would support the past peak rate of production for two or more centuries and possible reserves would support such production for perhaps two millennia. Emphasis in production has been on coking coals which constitute 42 percent of the proven reserves but furnish about two-thirds of the total production, whereas high volatile coals, with equal reserves, now provide only 22 percent of the output. During the prewar period the Ruhr produced two-thirds to three-fourths of the total German output. Of that production, one-fourth to one-third was exported. In 1937 some 306,000 workers were employed in the production of 127,752,000 metric tons of bituminous coal.[16]

The early postwar period was a difficult one—production fell to about 1 million tons per month, a tenth or less of normal. But recovery was comparatively rapid and by the early 1950's production of coal and lignite (in coal equivalent) in Western Germany (largely but not wholly from the Ruhr) was near the prewar rate. However, coal was 15 million tons short of prewar whereas lignite exceeded prewar by about 18 million tons. Nevertheless, owing to industrial revival, lowered labor productivity in the mines, and agreed deliveries, problems are far from being all cleared away. The labor productivity

[14] See the Economist (London), Coal Threatens the Boom, May 22, 1954, pp. 437–438.

[15] See the Economist (London), Energy for Success (insert pp. 1–8), vol. CLXXIII, November 27, 1954, for a brief examination of several projections which have been made respecting standards of living, production, and fuel requirements in the United Kingdom. In summary, that analysis holds that it appears questionable whether, even with extra investment, the coal mines will reach 250 million tons by 1965; estimates as to nuclear electricity are contradictory as to probable cost and time required for development; increasing amounts of heavy (black) oils apparently will be required and imported if available.

[16] For comprehensive treatment of historical evolution and prewar development see Chauncy D. Harris, The Ruhr Coal-Mining District, Geographical Review, the American Geographical Society, New York, vol. XXXVI, No. 2, pp. 194–221, and Norman J. Pounds, The Ruhr—A Study in Historical and Economic Geography, Faber, London, 1952, 283 p.

problem is a major one, the force being 45 percent larger than prewar for a somewhat lower tonnage:

Western Germany

	1937	1938	1949	1950	1951	1952
Output of hard coal (million tons)	138	137	103	111	119	123
Manpower (thousands)	298	321	376	391	402	419
Overall output per man-shift (tons)	1,575	1,500	1,032	1,063	1,102	1,114

Source: Economist (London), Dec. 7, 1953, p. 430.

A temporary emergency in 1951–52 was met by heavy imports (13,500,000 tons) mostly from the United States. Exports have been continued, consistently in the range between 20 and 25 million tons, providing about 30 percent of the solid fuel imported by European countries. Use within Western Germany appears to be comparatively efficient, more than 50 percent of the total being used in secondary forms such as gas, briquettes, and thermal electricity. Consumption of solid fuels for domestic purposes is relatively low, about 27 million tons per year, whereas about 53 million tons are used in that way in the United Kingdom where the population is roughly the same. However, in spite of having a population which has increased by more than 20 percent, the level of industrial production of Western Germany has increased as compared with prewar only by about the same amount as in other Western European countries whose populations have remained stable. So, with additional industrialization very likely and with the near certainty that increased consumption must come from its own mines, what happens to coal exports?

There are plans that the production of Western Germany, largely from the Ruhr, should reach 140 million tons in 1956, possibly 150 million tons. Investment for modernization and reequipment, plus the opening up of at least 8 new workings was expected to require nearly DM3,800 million of which less than half was likely to be available in company reserves. Are investment funds available from outside and on what conditions? Recruitment of up to 20,000 additional workers seemed possible, if housing could be provided.[17] All of this is pertinent to the question of whether the industry is stuck at its present level of production, which approximates that of prewar, or will it expand? The raw materials are abundantly available.

Political, economic, and administrative problems of operation within the six-nation Coal-Steel Community have now had about 1½ years to arise and move toward a solution. In February 1953, tariffs, import, and export quotas and some discrimination as to transport charges within the common coal market were swept aside. Maximum price control (by the High Authority) has continued, also purchasing and marketing organizations and systems of rebate, etc. The maximum price on Ruhr coal was reduced DM2 but still costs more than imports from the United States. Some "rationalization" has been started in other areas—French mines are running a total annual deficit of about £22 million but 5,000 French miners are to be shifted, with their families, from Centre-Midi to more productive Lorraine fields. The High Authority was challenged early in 1954 by the announced clos-

[17] OEEC, Coal and European Economic Expansion, pp. 39–42.

ing, because they were running at a loss, of 7 Belgian mines employing 6,000 men. In any case, a comparison of the first 10 months of 1953 with the same period in 1952 shows an increase of about 20 percent in the coal trade in the Community.[18] The "association" of the United Kingdom with the Community, in December 1954, appeared to be a favorable step forward.

c. The Silesian area

Some 80 percent of the coal resources of captive Europe are in the Silesian-Ostravan area, formerly divided among Germany, Poland, and Czechoslovakia, but now held by the latter two countries. Peak production of 106 million tons was obtained in 1943 by the Germans under the spur of war needs. There was relatively little direct military damage to the area during the war but there was sharp decline in production during the latter stages of war and early occupation. However, most of the working miners remained in the area and production was rather quickly restored. By 1950, it reached 87 million tons of which about four-fifths was produced in present Poland—about the same as in 1937. Beginning in 1948, control was from Moscow, through Russian advisers in top positions. Labor has been largely Polish.

Plans call for 92 million to 95 million tons annual production by Poland and 20 million to 23 million tons from Czechoslovak fields (by 1953), a total of 112 million to 118 million tons per year for this area. Smaller fields elsewhere in captive Europe produced about 14 million tons in 1950, about one-sixth as much as the Silesian area. However, these smaller fields because of location and quality of coal are of high importance to local industry, especially such iron and steel development as is found near them. Coal production in captive Europe by the beginning of 1955 may be estimated at 133 million tons or a little more, thus exceeding the present and prewar Ruhr, the present production of the Donets Basin (less than 100 million tons), but slightly less than the wartime production of Pennsylvania.

The Silesian area, but more particularly other parts of the eastern area, also produces large quantities of lignite, in fact, about two-thirds of the world total (ex-Soviet Union) in the early postwar years. This fuel is largely used in production of electric power, for briquettes, and as a raw material for chemical industries.

The problems are not resources but capital investment and labor morale. Flexibility in the mining of coal, though restricted, particularly in terms of increasing production, is a resultant of much more than variance in the quantity of the labor supply. Capital expenditure in work not immediately productive, exploration, sinking new mines, cutting new faces, and transport to serve the new development all take time, forward planning and capital investment. Current output can be moderately if not strikingly stimulated for a time by neglecting preparation for future production. Apparently this is the problem which has finally caught up with those who manage the Silesian production. The questions which arise, but which cannot be answered definitively have to do with whether these mines can meet the demands made on them by the captive area, plus exports to the Soviet Union, and still continue to export about 10 million tons to independent Europe so as to obtain needed foreign exchange. In any case,

[18] Economist (London), January 9, 1954, p. 85.

shortages of coal (and electric power) are reported as major factors in failure of some industries to meet official quotas.

d. The Soviet Union

One authority [19] on the Soviet Union concludes that the aggregate reserves of Soviet coal are very great, something of the order of a trillion tons. However, there appears to be a major geographical disadvantage in that something like 90 percent of the coal is in the east, whereas about 90 percent of the iron ore and population is in the west. Certainly production shows a large increase between prewar and 1950 (table 51). How much of this increase occurred in western Soviet Union is problematic. But production does seem to have increased by about 20 million tons per year in 1951 and 1952 with a 1955 target of 372 million tons apparently not completely unrealistic.[20] Moreover, as reported by Shimkin, the more westerly Donets Basin and Moscow Basin have tended to exceed the set goals.[21] And reserves, though concentrated farther east, are nevertheless very substantial in the European part of the Soviet Union—the Donets Basin reserves amount to some 44 billion tons, much of it of comparatively high quality.[22]

TABLE 53.—*Energy consumption, commercial sources, by regions, 1937 and 1950*

	Total consumption, thousand metric tons coal equivalent [1]		Consumption per capita, metric tons coal equivalent [2]	
	1937	1950	1937	1950
Western Europe:				
Austria	7,054	10,793	1.04	1.54
Belgium [3]	34,744	31,271	4.02	3.50
Denmark	6,442	8,984	1.71	2.09
France	88,173	85,163	2.12	2.03
West Germany	[4] 204,607	126,906	[4] 3.02	2.55
Ireland	3,235	3,316	1.10	1.10
Netherlands	15,425	19,840	1.79	1.96
Norway	10,039	14,270	3.44	4.37
Sweden	15,722	22,501	2.50	3.22
Switzerland	7,572	10,007	1.81	2.13
United Kingdom	202,453	223,503	4.28	4.42
Mediterranean Europe:				
Greece	1,296	1,724	.18	.22
Italy	28,181	29,519	.66	.63
Portugal	1,780	2,240	.24	.26
Spain	5,476	16,227	.22	.57
Captive Europe:				
Bulgaria	901	2,168	.14	.30
Czechoslovakia	25,711	37,250	1.78	2.96
East Germany	[5]	47,591	[5]	2.64
Hungary	6,555	9,101	.72	.98
Poland [4]	25,783	52,199	.75	2.49
Rumania	5,680	7,339	.37	.46
Other Europe:				
Finland	3,719	4,766	1.03	1.17
Yugoslavia	2,879	6,655	.37	.46
Soviet Union [6]	177,000	299,000	1.07	1.50
United States	759,300	1,139,850	5.89	7.51

[1] Source: World Energy Supplies in Selected Years, 1929–50, Statistical Papers, Series J, No. 1, Department of Economic Affairs, Statistical Office of the United Nations, September 1952, appendix, table 13, p. 90.
[2] Ibid., table 4, p. 66.
[3] Includes Luxembourg.
[4] De facto boundaries used.
[5] See West Germany above.
[6] Includes Baltic States.

[19] Shimkin, Demitri B., Minerals, A Key to Soviet Power, Harvard, 1953, p. 187.
[20] Economist (London) January 13, 1953, p. 265.
[21] Shimkin, D., op. cit., p. 179.
[22] Ibid., p. 189.

TABLE 54.—*Waterpower reserves* [1] *and electricity production,* [2] *by regions, 1937, 1950, 1952, 1953*

[Production in millions of kilowatt-hours]

	Hydro reserves and utilization, 1937		1937			1950			1952 [3]			1953 provisional total [4]	Planned (total) [5]
	Potential yield (millions of kilowatt-hours)	Utilization rate (percent of potential)	Hydro	Thermal	Total	Hydro	Thermal	Total	Hydro	Thermal	Total		
Western Europe:													
Austria	9, 200	24. 6	2, 474	418	2, 892	4, 846	1, 505	6, 351	6, 370	1, 662	8, 032	8, 700	
Belgium [6]			57	5, 975	6, 032	64	9, 114	9, 178	77	9, 391	9, 468	10, 700	
Denmark	176	20. 5		1, 104	1, 104	25	2, 125	2, 150			2, 546	2, 600	
France	36, 000	27. 4	10, 980	9, 100	20, 080	16, 170	16, 900	33, 070	22, 400	18, 350	40, 750	38, 900	
West Germany	[7] 12, 000	[7] 57. 5	[7] 6, 904	[7] 42, 065	[7] 48, 969	8, 262	36, 353	44, 615	9, 945	46, 263	56, 208	60, 500	
Ireland	1, 760	17. 0	242	67	309	468	500	968			1, 134	1, 200	
Netherlands	152			3, 484	3, 484		7, 323	7, 323		8, 498	8, 498	9, 100	
Norway	95, 200	9. 6	9, 165	111	9, 276	17, 655	42	17, 697	18, 726	140	18, 866	19, 100	
Sweden	24, 000	29. 0	6, 971	1, 011	7, 982	17, 297	839	18, 136	19, 614	1, 079	20, 693	22, 400	
Switzerland	21, 600	32. 5	6, 809	33	6, 842	10, 318	161	10, 479	12, 583	126	12, 709	13, 500	
United Kingdom	4, 160	14. 9	755	23, 476	24, 231	1, 478	54, 859	56, 337	1, 672	62, 223	63, 895	65, 500	
Total, Western Europe	204, 248		44, 357	86, 844	131, 201	76, 583	129, 721	206, 304	91, 387	147, 732	242, 799	252, 200	
Mediterranean Europe:													
Greece	2, 080	. 6	20	423	443	10	670	680			870	900	
Italy [8]	36, 400	39. 5	14, 861	569	15, 430	22, 781	1, 543	24, 324	27, 107	3, 737	30, 844		
Portugal	2, 680	5. 2	139	267	406	436	501	937	1, 191	142	1, 333	1, 400	
Spain	34, 000	8. 8	2, 306	166	2, 472	4, 619	1, 693	6, 312	7, 796	1, 620	9, 416		
Total, Mediterranean and Western Europe	279, 408		61, 683	88, 269	149, 952	104, 429	134, 128	238, 557	127, 481	153, 231	285, 262	254, 500	
Captive Europe:													
Albania	2, 984												
Bulgaria	1, 760	7. 6	134	68	202	280	450	730			1, 400	1, 500	[9] 1, 800
Czechoslovakia	4, 160	10. 3	57	3, 558	4, 115	1, 100	8, 000	9, 100			11, 500	12, 400	[10] 16, 500
East Germany	[11]	[11]	[11]	[11]	[11]	400	15, 600	16, 000			22, 400	23, 700	[10] 33, 414
Hungary	960	1. 6	15	1, 265	1, 280	70	272	2, 791			4, 000	4, 600	[12] 6, 000–6, 500
Poland	8, 000	. 6	49	3, 579	3, 628	500	8, 908	9, 408			12, 700	13, 600	[10] 19, 300
Rumania	17, 600	. 5	89	988	1, 077	200	1, 900	2, 100			2, 900	3, 500	[10] 4, 700
Total, captive Europe	35, 464		344	9, 458	10, 302	2, 550	35, 130	40, 129			54, 900	59, 900	

Other Europe:													
Finland	14,880	13.9	2,066	720	2,786	3,650	516	4,166	4,066	432	4,498	5,300	
Yugoslavia	24,000	2.2	450	463	913	1,175	1,227	2,402	1,423	1,277	2,700	3,000	
Total, other Europe	38,880		2,516	1,184	3,699	4,825	1,743	6,508	5,489	1,709	7,198	8,300	
Soviet Union [13]	469,000	1.5	5,800	30,800	36,600	13,000	77,009	99,000			116,400	133,000	
Northern America	363,920	19.7	45,210	75,412	147,422	145,001	235,235	380,236	169,218	355,624	524,842		

[1] Potential yield per annum, firm power. Source: Guyol, Energy Resources of the World, U. S. Department of State, Publication No. 3428, June 1949, p. 83.
[2] Total production so far as possible.
[3] Monthly Bulletin of Statistics, United Nations, November 1953, table 2, North American data are incomplete and French data for 1952 include Morocco.
[4] From Economic Bulletin for Europe, 4th Quarter 1953, vol. 6, No. 1, Geneva, May 1954, table XV, p. 65.
[5] Jan H. Wszelaki, Fuel and Power in Captive Europe, National Committee for a Free Europe, Inc., New York, 1952, p. 41.
[6] Includes Luxembourg except for 1952, when such inclusion would have added 832 to the total, with breakdown between thermal and hydro not shown.
[7] All Germany.
[8] Including Trieste.
[9] 1953.
[10] 1955.
[11] See West Germany above.
[12] 1954.
[13] Includes Baltic States and Karafuto.

Source: Largely from World Energy Supplies in Selected Years, 1929-50, Statistical Papers Series J, No. 1, Department of Economic Affairs, Statistical Office of the United Nations, September 1952, table 12, p. 87.

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F. Transportation

The following comments on transportation in the Soviet bloc and the independent countries of Europe constitute a quick survey of some of the highlights in the transport sectors of their economies. In the time which has been available to assemble this material, it has not been possible to perceive growth trends for every form of transportation nor always to compare trends or recent developments when they were clear. It is a comparison of some standards and capabilities between the free and the Communist parts of Europe, with occasional reference to American standards and practices when information on these was readily at hand. Traffic volume data refer to freight traffic alone.

GENERAL FACTORS

The geography of a region and its climate are important basic factors in transportation capabilities and costs. By comparison with the geographic and climatic conditions in the greater part of Europe, the Soviet Union suffers disadvantages in all but one respect. Her topography in the populous western regions has been favorable to railroad building because of its flatness. In other respects, particularly the vastness of distances to be traversed and the severity of winter, the Soviet Union is handicapped. Her rivers flow to inland seas or, in Siberia, to the Arctic Ocean, whereas Western Europe is served by extensive river systems, one or more flowing from the heart of the continent toward each of the neighboring seas. Soviet ports, as well as rivers, are subject to long periods of freezing which compounds difficulties due to the relative scarcity of good natural harbors. These ports and harbors are nearly all restricted in access to the sea lanes of the world. Western Europe, of course, includes the greatest maritime nations in the world whose fleets and shipbuilding capacities greatly outweigh those of the Soviet bloc.

RELATIVE IMPORTANCE OF CARRIERS

In consequence of the basic factors outlined, the Soviet Union is dependent on her railroads for a preponderant share of total transportation. The distribution of freight volume between major carriers in 1950 was typical for most years since the late twenties.

Distribution of freight volume in the Soviet Union [1]

[Percent]

Railways	85
Inland water transport	6
Maritime shipping	5
Motor vehicle transportation	3
Total	[2] 100

[1] Based on ton-mileage measures of volume.
[2] Percentages do not total 100 because of rounding.

Attempts to spread the national transport load more evenly, reinforced by ministerial exhortation, have been urged for years but the railroads have nonetheless taken the major burden.

Recently released figures of traffic volume in the United States [23] show that railroads have been progressively losing their importance relative to other public carriers since 1930. At that time the railroads carried about 75 percent of the freight load (measured in ton-miles) and slightly under 70 percent of the passenger traffic (passenger-miles). Decreases were registered in both kinds of traffic in 1940, reversed in 1944 (especially for passenger traffic, no doubt in connection with gasoline rationing) to be followed by a return to the secular trend position in 1953. In the latter year railroads carried slightly over 50 percent of public carrier freight, waterways carried about 18 percent, and trucks and oil pipelines combined, slightly over 30 percent. Passenger traffic in 1953 was distributed between railroads, under 50 percent; buses, about 30 percent; and electric interurban lines, waterways, and airlines together shared the remaining portion of over 20 percent. Among public carriers, today, the United States places much less peacetime dependence upon its railroads than the Soviet Union, although they are still of first importance. Recalculation of the distributive shares to include private vehicles would clearly reduce the importance of other shares relative to trucks and passenger cars.

The relative importance of the major carriers in Western Europe is not as clear since no comprehensive statistics of road transport have been assembled. Regarding other inland transport, aggregates for railways (14 countries) [24] and inland waterways (5 countries) [25] indicate that about 11 percent of the total ton-mileage for these 2 carriers was borne by inland waterways in 1949 and 1950 and the remaining 89 percent carried by railroads. However, Western Europe's large fleets take part in European inland transport through coastwise shipping. Furthermore, the recent trend in Western Europe has been toward rapid increases in road traffic. According to the ECE, there has been "considerable expansion in international traffic by road, the rate of increase probably being higher than that of national traffic generally." [26] Despite this, it seems clear that the total volume of such traffic is still relatively small when compared with that carried by rail or inland waterways.

TRANSPORTATION REQUIREMENTS

In relative terms (ton-miles expended per unit of output), the transport requirements of the Soviet Union now exceed those of all the principal powers of the world.[27] It has been pointed out that "the Soviet Union requires about 40 percent more ton-mileage of transportation per unit of industrial output than does the United States." [28]

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[23] New York Times, November 7, 1954.
[24] U. N. Economic Commission for Europe, Annual Bulletin of Transport Statistics, 1950, Geneva, 1951. Chart A, p. 10, including Austria, Belgium, Denmark, France, Italy, Luxembourg, Netherlands, Norway, Poland, Sweden, Switzerland, Trieste, Turkey, United Kingdom.
[25] Ibid., including Austria, Belgium, France, Netherlands, United Kingdom.
[26] Op. cit., p. 21.
[27] Blackman, James H., Soviet Economic Growth, edited by Abram Bergson, 1953, p. 157.
[28] Shimkin, Demitri B., lecture before the Industrial College of the Armed Forces, Washington, D. C., March 22, 1954.

The substantial rise in the relative volume of traffic which has occurred under the Soviet regime is due in part to an increase in the average length of haul which has resulted from expansion of economically usable territory. In addition, the widening of market relations which has evolved more or less in defiance of the program of "regional self-sufficiency" enunciated by party authority has meant that an increasing percentage of total output enters the transport system.

Blackman [29] believes that the expansionary push for more transport per product unit will recede on the basis of analogies to West Europe and the United States in their early stages of development. He concludes, however, that Soviet transport coefficients will remain the highest in the world. Others, while generally supporting Blackman's data and conclusions, make clear that there is some doubt on the score of "deceleration of growth in Soviet transport needs relative to industrial output * * * in the foreseeable future." The more or less immutable factors of geography and resources, together with the planned expansion and eastward extension of industry, indicate a probable continuation of a high and, for some time, growing coefficient of transport to industrial output.

RAILROADS

As in other spheres of her program of industrialization, the Soviet Union is years behind Western countries in expanding her railway networks to meet increasing needs.[30] Only 40,000 miles of track were taken over from the czarist regime. By the end of 1940 the length reached about 65,000 miles, of which 12,400 were newly built and about 10,500 were annexed with the Baltic States. The national pattern has been likened to an immense T with its head stretching from Leningrad down to the Ukraine and its leg formed by the famous Trans-Siberian Railroad stretching east to the Pacific. The greater part of the network was, and is, concentrated in the western regions. Overall density was very low as the following figures for 1937 show:

TABLE 55.—*Railway mileage in relation to territory by regions, 1937*

Country:	*Miles per 100 square miles*
United States	8.3
France	12.6
Great Britain	21.5
Soviet Union	.7

Source: Garbutt, P. E., The Russian Railways, London, 1949.

Reluctance to invest in railroad transport typified prewar practice in the Soviet Union. In the postwar fourth 5-year plan, 16 percent of total funds were allocated (though not necessarily spent) for reconstruction and expansion, the highest ever so allocated. Now the system extends about 74,000 route-miles, or 130,000 track-miles, about one-third the size of the present United States network of rail-

[29] Op. cit., pp. 157–162.
[30] See, in this connection, chart I in the summary chapter on steel.

roads. Both signaling equipment and roadways are below standards considered minimum in the United States. While the increased length of the network means increased density in relation to area compared to the 1937 figures shown earlier (modified by increases in territory since that year), the Soviet Union has retrogressed in density of track in relation to population. In 1937 there were 3.1 miles of track per 10,000 inhabitants (compared to 18.6 in the United States); with an estimated 1952 population of 205 million, there would be only 2.8 miles of track per 10,000 inhabitants.

Comparisons for seven European countries in 1952 (the gestative West European Union) indicate a total length of over 79,000 route-miles and densities ranging from 1.93 miles per 10,000 inhabitants in the densely populated Netherlands to 8.07 in Luxembourg. Other densities were 3.54 for Belgium, 6.02 for France, 3.91 for Federal Germany, 2.86 for Italy, and 3.91 for the United Kingdom, all per 10,000 inhabitants. The total length of track in these seven countries, being only part of free Europe, indicates that the total of all West European networks far exceeds the Soviet total and, since a smaller area is served, is therefore more dense. The Western European figures reflect a remarkable job of postwar reconstruction.

As in other spheres, the current position of railroad networks is not clear for captive countries of Eastern Europe. East Germany has the most developed railroad system with those of Czechoslovakia, Hungary, and Poland following in order named. Much destruction was wreaked during World War II, but it is not known how far, or even whether, restoration has taken place.[31] The most recent data available indicate Czechoslovakia had 20,500 miles of track in 1937 [32] (about equal to 1952 mileage in the United Kingdom); Rumania had 6,960 miles in 1938 (about two-thirds Italy's 1952 mileage); Poland had 14,850 miles in 1947 (somewhat less than Federal Germany in 1952); and Hungary had 6,800 miles in 1949. None of the satellites has more than a modest expansion plan for its railroad system. Poland, for example, announced 437 miles of new line would be added during the 6-year-plan period. Resources of the captive peoples are to be concentrated on producers' goods as they are in the captor state. Because the other satellite nations published no plans to expand their rail nets and because the degree to which plans have been fulfilled is unclear, an up-to-date picture cannot be drawn of the region as a whole.

RAILROAD ROLLING STOCK

The following figures give some indication of relative numbers of locomotives on the railroad systems of the Soviet bloc compared to the West. The figures contain many estimates and suffer in comparability due to the inclusion of different types of locomotives, but it is believed the regional aggregates provide relatively valid comparisons.

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[31] Using only unclassified sources.
[32] Less war damage was suffered in Czechoslovakia than elsewhere.

TABLE 56.—*Locomotive park in Western Europe, North America, and the Soviet bloc in 1953*

Country:	*Thousand locomotives*
Independent Europe [1]	72
United States	[2] 36
Canada	5
Total West	113
Soviet Union	34
European satellites	22
China	3
Total Communist bloc	59

[1] Includes OEEC member countries, Finland, Spain, and Yugoslavia.
[2] Class I railroads.

The Soviet bloc has just over half the number of locomotives in use in the West, both when Canada and China are included and when they are omitted.

The greatest part of the Soviet locomotive pool is steam driven; only 2 or 3 percent of the total being electric or diesel-electric. Since both diesel-electric and electric locomotives perform better in many respects, Soviet reliance on steam places the system at a disadvantage in comparison with current practices in the United States and Western Europe. Furthermore, the majority of Soviet steam locomotives in use are of an outmoded type. In Western Europe extensive electrification is being carried out. At the end of 1952, Austria and Norway had over 20 percent of total line electrified, Italy and Sweden over 30 percent, the Netherlands 40 percent, and Switzerland 95 percent of all lines. Others had lesser percentages electrified but a number were pursuing programs of electrification, notably France. In general the lines that carry the heaviest traffic have been electrified first. For example, in the Netherlands, where most of the main lines are electrified, 58 percent of the passenger-miles and 31 percent of the freight-train miles were electrically operated in 1952.

Data on number of freight cars are scarce, and there has been insufficient time to prepare comparisons of loading capacity. The table below contains available figures for number of freight cars in the Soviet Union and the captive countries for some years.

TABLE 57.—*Freight cars in the Soviet bloc, 1938 and 1950*

[In thousands]

	Prewar		Postwar	
	Year	Number	Year	Number
Soviet Union	1938	662	1950	909
European captives:				
Bulgaria	1936	11	[1]	[1]
Czechoslovakia	1937	98	1948	72
Eastern Germany	[1]	[1]	[1]	[1]
Hungary	1937	43	1949	35
Poland	1937	169	1947	144
Rumania	1937	64	1946	79

[1] Not available.

Source: United Nations Economic Commission for Europe Annual Bulletin of Transport Statistics, various issues.

In every country except the Soviet Union and Rumania, postwar stocks of freight cars were still depleted by wartime destruction in the years shown. The Soviet figure may reflect reparations and cars seized as war booty in addition to lend-lease shipments. The Eastern European postwar shortages in railway rolling stock were counterbalanced to a certain extent by increased intensity of use. Longer trains and longer hauls became usual, and the number of railroad employees grew a great deal. In Poland, for example, it was reported that 359,000 worked on the railroads in 1948 compared to only 183,000 in 1937.

In comparison with Western Europe, the Soviet bloc is as poor in its stock of freight cars (although those of the Soviet Union are larger than most) as it is in number of locomotives. Numbers in service for the United Kingdom alone exceed one million. France and Federal Germany, in 1951 had 371,000 and 275,000, respectively. Italy, in the same year, had 111,000 and, with other countries of Western Europe, had far larger numbers as part of the pool shared under international agreements, than the total available to the Soviet Union and its European satellites.

RAILROAD FREIGHT VOLUME

The table below shows the growth in freight hauled by all carriers in the Soviet Union including railroad, river, domestic maritime, motor ("trucking for hire" and trucking operations by nontransport agencies), air and pipeline transport. They are based on simple unweighted totals of ton-kilometers borne and have been converted to ton-miles for ease of understanding. Similar growth trends are shown for Soviet railroads.

TABLE 58.—*Freight volume, all carriers and railroads, in the Soviet Union, 1938–62 (plan)—actual and projected*

Year	All carriers		Railroads	
	Billion short-ton-miles	Index 1938=100	Billion short-ton-miles	Index 1938=100
1938	299	100	254	100
1948	360	120	307	121
1951	543	182	461	182
1953	(1)	(1)	545	215
1954	(1)	(1)	572	225
1955 plan	699	234	576	227
1962 estimated	902–1049	302–351	783–912	308–359

[1] Not available.

Source: James H. Blackman, Transportation in Soviet Economic Growth, Abram Bergson, editor, 1953. Table 4.10, p. 150, and official announcements.

The picture sketched in these data is one of rapid increase in transport operation. The figures conceal some discontinuities in the trend such as the setbacks suffered in the war and stagnation in the mid-thirties. The general trend, however, has been one of growth. By 1951 almost seven times as much freight was being hauled as at the beginning of the plan era, and the increase in railway freight volume was more than sevenfold.

The 1953 and 1954 railroad data were computed from plan fulfillment announcements given in percentage increases. On the assump-

tion that these data are accurate, the upper figure for the 1955 plan (shown in the table) for railway freight will probably be achieved. This would represent a smaller increase than that given for 1954 over 1953. Tabulating the 1962 projections with the other figures, it appears that the volume and index data indicate an increase over the next 7 years of about the same order of relative magnitude as that which took place over the last 7. In other words, a "straight-line" rate of increase is foreseen. While this sort of tempo is believable in view of Soviet plans for industry and achievements to date, one may question the ability of the railroads to handle a four-fifths or larger share of an increasing load.

No series has been prepared for all Western European carriers, but some comparisons in the growth of railroad freight volume can be made. The table below sets out railroad freight volume in selected years for the seven countries of Western European Union, all independent Europe, and the Soviet Union.

TABLE 59.—*Railroad freight volume in Western Europe and the Soviet Union in 1938, 1950, 1951, and 1952*

[In billion ton-miles]

	1938	1950	1951	1952
Soviet Union	254	412	461	(1)
Western European Union	[2] 83	98	110	108
Soviet Union as percent of Western European Union	306	420	419	(1)
Total Western Europe	[3] 104	115	134	133
Soviet Union as percent of Western Europe	244	350	344	(1)

[1] Not available.
[2] Includes estimated 50 billion ton-miles for West Germany.
[3] Includes estimated total of 19.5 billion ton-miles for the smaller European countries.

Source: Soviet Union, Blackman, op. cit. Western Europe, U. N. Annual Bulletin of Transport Statistics, 1950, 1951, and 1952.

The comparisons indicate that Soviet railroad volume exceeds that of Western Europe and has grown faster since before the war. There is a presumption that the rapid rise in Soviet volume is partly due to lines and equipment taken over with territory acquired at the end of the war. Presumably the inclusion of Eastern European figures in a Soviet bloc total would tend to lessen the increase. Finally, we have noted that railroads are nearly all-important in the Soviet Union while this is not the case in Western Europe.

Wartime destruction and deterioration from lack of maintenance caused great difficulties in Western Europe on railroads in the period just after the war. There was, however, some excess capacity in these railways before the war, and increased volumes of traffic can be carried, without adding to capital, at the cost of speed, comfort or convenience. In France, Italy and Denmark, for instance, the average trainload increased by 30 to 65 percent between 1938 and 1947.[33] The smaller part of the increase is achieved by using a higher number of cars per train while the larger part is due to fuller loading of cars.

By 1951, the position in rolling stock and facilities had very nearly been restored and, to the extent that new equipment represented im-

[33] United Nations, Economic Commission for Europe, Economic Survey of Europe Since the War, Geneva, 1953.

proved efficiency in operation, was in many places superior to prewar. Extensive electrification, as we have noted, has been carried out, especially in France and the Scandinavian countries. In most Western European countries the railroads were able by the mid-1950's to offer the shipper prewar standards of speed and service and the passenger a higher degree of comfort and speed than had prevailed before.

The results of new investment were reflected in the freight volume statistics shown above. Independent Europe as a whole jumped total freight volume from 115,300 million short-ton-miles in 1950 to 134,270 in 1951. An important share of this increase was due to increases in France and Germany, but every country showed a gain except for the relatively minor tonnages of Greece, Ireland and Yugoslavia. There was a small drop in 1952, to 132,820 million short-ton-miles and a return to the 1951 level in the year 1953. The figure for the latter year is given in the following table which shows the relative bulk of railroad freight volume as between East and West.

TABLE 60.—*Railroad freight volume of Western Europe, North America, and the Communist bloc, 1953*

[In billion short-ton-miles]

Western Europe	134	Soviet Union	538
Canada	66	Captive countries	72
United States	605	China	48
Total West	805	Total Communist bloc	658

The relation of the total Soviet bloc to the total West is much different from the comparison of Western Europe and the Soviet Union alone. The bulk of the United States in the free world is reflected in the reduction to 82 percent of the Soviet bloc relation to Western railroad freight volume. As before, the relationship is virtually unchanged by the inclusion of Canada and China.

The figure given for the European captive countries coincides fairly well with what is known of recent railroad developments in that group of countries. The United Nations [34] estimates for 6 countries (all the satellites except Albania) in 1951 and 1952 indicate ton-mileages of 63 and 70 to 71 billion, respectively. The volume of freight traffic grew about 12 percent between the 2 years. For Poland and Czechoslovakia, planned increases were not fulfilled. The distribution of total railroad freight volume was:

	Percent		*Percent*
Poland	42	Hungary	7
Czechoslovakia	18	Bulgaria	4
East Germany	18		
Rumania	10	Total	100

These percentages, however, do not reflect the variation in intensity of effort exerted by the individual countries. Bulgaria, which has the lowest share, ranks first among the satellites both in amount of new construction and in the development of freight traffic since the war.

Though no ton-mileage comparisons with prewar volume are available, a measure of tonnage hauled on the networks of five countries (those listed above less Eastern Germany) is available for 1938 and 1952. In the former year the combined networks hauled 226 million

[34] United Nations, Economic Commission for Europe. Annual Bulletin of Transport Statistics, 1952 and 1953 issues.

short tons compared with 442 million tons in 1952; an increase of 96 percent over the whole period. This is not a good measure of growth, however, because underutilization of equipment, particularly in the earlier years, is concealed by the failure to take into account any distance or time units together with weight.

EFFICIENCY IN RAILROAD OPERATIONS

In a brief treatment of this kind there is no space for exhaustive comparisons of relative railroad efficiency. However, some comments, drawn principally from the work of Prof. Holland Hunter,[35] will serve to put in perspective measures of rapid growth in transport volume in the Soviet Union.

The Soviets and their European satellites put politics before transport economics in planning industrial location. They also tend to minimize investment in transportation so as to maximize current output, thus causing drives for operating efficiency and improved use of limited resources. Railroads must seek to minimize the amount of hauling despite the conflicting factors of resource distribution and industrial location policy both of which tend to increase the length of hauls and the amount of cross-hauling, thus raising the volume transported per unit of output.

Average length of haul remains high, and despite progress in eliminating waiting periods during loading and unloading, the average turnaround time for freight cars is evidently not satisfactory to Soviet or the Eastern European authorities. Drives to achieve improved performance by spreading the loads more evenly over time meet consistant resistance from the shipment pattern of centrally-controlled enterprises rushing to meet planned output quotas toward the end of each plan period. Intrabloc shipments must also overcome the time and cost elements of changing gages. The captives use standard and the Soviet widegage systems.

Inadequate stocks of locomotives and freight cars have led the Soviet railroads to strenuous measures for keeping both in motion. Average daily mileages for locomotives are 31 percent higher than in the United States and freight cars move almost twice as far per day. The latter reflects the curtailed loadings and unloading time noted earlier. These comparisons overstate the relative productivity of Soviet freight trains in terms of ton-miles moved, since tons per locomotive and per car are considerably lower in the Soviet Union than in the United States. Nevertheless, the performance of Soviet motive power and rolling stock is impressive.

Professor Hunter estimates that Soviet freight trains, on a terminal-to-terminal basis, are only three-quarters as fast as American trains. Train weights are also far below our standards with the result of lower gross ton-miles per freight train-hour. This index is the most inclusive measure of operating performance. In 1950 the Soviet figure was only 44 percent of the United States average.

MOTOR-VEHICLE TRANSPORTATION

The loss of rail and inland waterway capital due to wartime destruction on both sides of the Iron Curtain was partly offset by in-

[35] See especially Soviet Transportation Policy (heliograph) and How the Russians Run Railroads, Railway Age, August 30, 1954.

creases in road transport. The increases were aided materially, in Western Europe by the release of surplus military vehicles in the immediate postwar period. The general increase in road fleets was particularly striking in Italy, Turkey, and Ireland.

During the years since the war, the motor-vehicle industries of Western Europe have been restored and expanded. Their combined output in 1952 was over 1,800,000 vehicles compared with about 450,000 produced by the Soviet Union, or 535,000 in the Soviet bloc. No area approaches United States volume in this industry; over 5,500,000 in 1952. The Soviet plan figure for 1955 is 477,000 trucks and passenger cars, less than one-fifteenth of 1953 output in the United States.

In Western Europe, as in the United States, the extension of highways and establishment of motor-vehicle industries, together with the growth of related skills and technical services, have resulted in transfer of great portions of the transport load, especially for passengers, to road traffic.

In recent years great stress has been laid by Soviet authorities on shifting short-haul rail traffic to trucks. This may not have been the most economic plan. "Instead of building local spur lines and sidings for railways, the transport industry has resorted to trucks for short bulk hauls (coal, ores, etc.) at relatively high cost." [36] But the railroads point out that short-haul traffic is very costly for them and uses equipment inefficiently. The emphasis in road building, therefore, has for some time been on streets and access roads in or to big cities. Trucking roads of comparatively short length are built to railheads from outlying producing units while a very limited number of intercity roads have been built or projected.

The present size of total truck parks is an indicator of the relative importance of road haulage in the Soviet bloc. The following table shows truck parks estimated to exist in 1953 in the regions under study. Since trucks predominate in the total motor-vehicle pools of Soviet-bloc countries, the comparison is favorable to them. The equivalence of Soviet to Western European parks per capita reflects the large tonnage hauled by truck in the Soviet Union but does not vitiate what has been said earlier about low ton-mileage. In both percentage and per capita relations it again appears the Soviet bloc is weak compared with the total West.

TABLE 61.—*Truck park in Western Europe, the United States and the Soviet bloc in 1953*

	Thousand trucks	Trucks per thousand persons
Western Europe	3,500	11.2
United States	9,359	58.0
Total West	12,859	27.2
U. S. S. R.	2,350	11.3
Captive countries	235	2.6
Soviet bloc	2,585	8.6
Soviet bloc as percent of West	20	3

[36] Demitri B. Shimkin, Fortune, May 1951.

Highway transportation in the captive countries is of comparatively minor importance. Roads of quality comparable with those in west Europe exist only in east Germany, some parts of western Poland, and Czechoslovakia. The farther east and south one looks, however, the worse the road standards get. The unimportance of highway traffic is underlined by the smallness of truck parks. Trucks are employed on short runs between factories and for city hauling, but as in the Soviet Union, long-distance hauling is practically unknown.

Roads, in the present pattern of Soviet road building, are highly susceptible to seasonal effects. Most Soviet roads become "endless stretches of bottomless sloughs in the * * * spring and fall rains, and trails of stifling dust in summer." During winter road surfaces become stabilized by frost, but snowstorms and blizzards may close them in many regions, sometimes for extensive periods. In 1937 (of a total estimated at from 1 to 2 million miles) only about 54,000 miles worthy of being called highways existed.[37] It is thought the 1951 total was about the same because of the effects of war. Prewar estimates put the proportion of hard-surfaced roads at not over 5 percent of the total.

Western Europe has extensive systems of national roads, a great part of which have all-weather surfaces. The seven countries of West European Union alone have about 1 million miles of roads and streets. The United States has 3,343,000. Density measures[38] indicate most of the northwestern nations have highly developed networks near the average of the United Kingdom and France (130 kilometers per 100 square kilometers of territory). Very mountainous European countries and most Mediterranean countries have densities near or below that of the United States (about 58 kilometers per 100 square kilometers) as, for example, 14 in Norway, 65 in Italy, and 32 in Yugoslavia. No accurate measures for eastern Europe are at hand, but it is probable that the density in Federal Germany (about 93 kilometers per 100 square kilometers) and Switzerland (112 kilometers per 100 square kilometers) may typify the northern captive countries while Greece and Turkey's densities (10 and 6, respectively) are nearer the Balkan average.

MERCHANT SHIPPING

Among the Soviet satellites in Europe, Poland is the only one which figures in international sea transport. Two-thirds of Poland's tonnage (190,000 BRT in 1950) has been employed in trade with China. The fleet is growing through purchases and home shipbuilding. Her ports and position in the Soviet bloc have cast her in the role of Communist shipper to the world. East Germany and Rumania also have ports and those of the former, including its shipyards, are the focus of intensive efforts at expansion. East Germany, too, has plans to increase its merchant navy to a fleet of 800 fishing boats and 22 freighters. Rumania, on the other hand, has no merchant fleet worth mentioning.

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[37] Estep, Raymond, Transportation in the Soviet Union, Air University, Maxwell, Ala., April 1951.

[38] Economic Commission for Europe, Annual Bulletin of Transport Statistics, 1952.

Western Europe contains most of the world's great maritime nations. Western Europe suffered very heavily in losses of merchant shipping from the World War. Twenty-four million gross registered tons were lost out of a fleet of 44 million tons in 1939.[39] The net result of wartime construction and scrapping was to make good some 7 million tons of this loss and some 2 million tons were lent by North America.[40] Europe ended the war, therefore, with its fleet reduced to two-thirds of its prewar size. Considerable relief was afforded by the transfer of over 5 million tons from the United States in the early postwar years. Nevertheless, Europe was faced with a formidable reconstruction problem. Its balance of payments on shipping account was seriously impaired both because of loss of tonnage and because the United States and other countries developed vested interests in shipping. The prevention of crisis in world shipping was left dependent on the periodic emergence of the American reserve fleet. The United States merchant fleet had trebled in size between 1939 and 1948; growing from 9 million to 27 million tons. The only other important contributor to the world shipping fleet, Japan, had lost 4½ million of her prewar 5½ million tons.

By 1954, however, the OEEC was able to report[41] that its members had not only made good their wartime losses but had increased their fleets over the prewar figure (35 million gross registered tons aggregate among 15 European members of OEEC; 62 percent of which was reported destroyed during the war). The fleets in July 1952 stood at 42.9 million gross registered tons; an increase of 20 percent. The distribution between the various categories of vessels has changed from the prewar pattern in response to the changing trends in world trade. For example, a larger proportion of most fleets is now composed of oil tankers to cope with the increasing world trade in oil. There are fewer large passenger liners and comparatively few dry cargo tramps, but the tonnage of dry cargo liners has increased appreciably.

Geography and climate have combined to limit the Soviet Union in the role of a seapower. Though she has consciously limited herself in international trade, maritime shipping might still be of consequence in meeting her internal transport problems had she adequate ports of reasonable accessibility to one another. Because of latitude and climate, not one major port is ice free the year round unless we include the comparatively new acquisition of Baltiysk (in prewar East Prussia). Even Odessa is ice locked 6 weeks of the year. The well-known historic drive of Russia under all regimes for year-around ports is founded on a real limitation. What ports she has, none better than third rate in tons cleared annually, are further limited in their usefulness for internal goods shipment by another fact of Soviet geography. Being joined on three sides by continental land masses, the Soviet Union must send her ships along very extensive courses between her Pacific, Black Sea, and Baltic coasts. Fulfillment of an old Russian dream would link Russia proper, Siberia, and the Soviet Far East via the northern seas, and great efforts are expended to make this dream a practical matter.

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[39] The data refer to steam and motor ships of over 100 tons.

[40] Mainly United States to United Kingdom. Excludes transfers of 800,000 tons from the United States to the U. S. S. R.

[41] Organization for European Economic Cooperation, OEEC at Work for Europe, European Transport Problems, Paris, 1954, p. 81.

Estimated figures of the present relationship between the Soviet bloc and the West in terms of merchant-marine tonnage are given in the table below:

TABLE 62.—*Seagoing merchant marine in independent Europe, North America, and the Soviet bloc, 1953* [1]

[In million deadweight tons]

	Tonnage
OEEC countries	42.9
Other independent Europe	14.1
Total independent Europe	57.0
United States	[2] 36.0
Canada	.8
Total West	[2] 93.8
Soviet Union	[3] 2.8
Captive countries	.5
Total Soviet bloc	3.3

[1] Oceangoing vessels over 1,000 gross tons.
[2] Includes the vessels described in footnote 3.
[3] Excludes United States-owned lend-lease vessels, totaling 800,000 deadweight tons.

These figures show the relative weakness of the Soviet bloc. Compared with Western Europe, the bloc has only 6 percent as large a merchant marine. Compared with Western Europe plus North America it is only 4 percent. Though naval tonnage and shipbuilding facilities are a large part of the Soviet picture, the merchant marine is decidedly inferior. Measures of tonnage shipped are not immediately available, but the most intense utilization could not overcome such disparities in fleets.

INLAND WATERWAYS

Particularly marked losses were suffered in the canal barge fleets of Western Europe in the war. It has been reported that the capacity of the barge fleet in Belgium, France, the Netherlands, and Western Germany was only four-fifths of prewar in the late 1940's.[42] The barge fleets, canals, and locks have been largely restored now, though this is part of a slower process than for railroads.

River carriage of freight is a fairly important part of Eastern Europe's transport system. One of the major traffic arteries for the entire satellite bloc is the Danube. Yugoslavia's break with the Cominform weakened the control exercised by the Soviet Union over this important river. Czechoslovakia, Hungary, Bulgaria, and Rumania all used it in conjunction with their canal systems to move much of their bulk freight. A recent press item announced the postponement of completion of the famous Danube-Black Sea canal which was thought to be in an advanced state of construction. This news probably bodes ill for the long-planned East-West canal which would link East Germany, Poland, and the Soviet Union from the Oder to the Dnieper by interconnections between the existing river systems.

[42] United Nations, Economic Commission for Europe. Economic Survey of Europe Since the War, Geneva, 1953.

In the Soviet Union, while inland waterways are of secondary importance among major carriers, travel is hampered over many months of the year. Navigable rivers and the much-vaunted canals, such as the recently opened Volga-Don Canal, are for the most part closed from 3 to 9 months of the year by ice. In those periods their surfaces become frozen highways, but the volume of freight tonnage transportable in such seasons is small.

The relative capabilities of the Soviet Union and Western Europe measured in ton-miles carried are: Soviet Union 1950—31 billion; 1955 plan—54 to 55 billion; 6 countries[43] of Western Europe 1952—52 billion. Yugoslavia's 1952 output of 470 million short-ton-miles and Bulgaria's 843 million provide clues to the size of inland waterway traffic in Eastern Europe.

OTHER MEANS OF TRANSPORTATION

Due to insufficient material useful for international comparison little can be said about pipelines, air transport, or other means of transportation, significant as they may be. The increased production of and trade in oil and oil products has been accompanied by the extension of pipelines in Europe on both sides of the Iron Curtain. Neither region is in a position to challenge the United States on this score, however. Fractional portions of total national freight are conveyed by pipe.

On the score of air transport, the countries of Western Europe have a clear supremacy over the Soviet bloc countries. France, the United Kingdom, Belgium, the Netherlands, Switzerland, and the Scandinavian countries all have international air carriers capable of competition with United States airlines. West Germany is now getting set to reenter this sphere with the revival of Lufthansa. Of the Communist countries, only the Soviet Union has a sufficiently developed air transport system to bear comparison with any West European line. No system outside the United States (with perhaps the exception of the United Kingdom) has gone far in the development of cargo movement by air. Data on the Soviet system is concealed because of its connection with the military. Travel by civilians is very limited.

No Western-Soviet bloc comparisons of air traffic or pipelines volume have come to light, though such comparisons, and similar measures of electricity transmission, could illuminate the growth of transport capabilities.

CONCLUSION

The result of this survey is to stress the diversity of transport capabilities in the West in contrast to Soviet dependence on its railroads. There is controversy over whether this dependence is the Achilles' heel of the Soviet Union. Kaganovich, in charge of Soviet heavy industry and transportation, has said that "on this heel we marched to Berlin" and cited the American Holland Hunter to deny any vulnerability in the Soviet railroads. No breakdown of the sys-

[43] Austria, Belgium, France, Federal Germany, Netherlands, and the United Kingdom. Omission of Denmark, Italy, Luxembourg, Sweden, and Switzerland, countries for which figures were not available, affects the total very little.

tem can be foreseen, but the constant pressure of growing need against the means for transportation clearly places limits on the future rapidity of Soviet growth. The West, by comparison, is well equipped, diversified, and relatively free of the same limitations.

G. Foreign Trade

Neither the Soviet Union nor any of the countries of Eastern Europe has ever been dominant in world trade. In 1913, Russian imports and exports accounted for 4 percent of total world trade. Since then Soviet foreign trade has fallen to a still smaller percentage of the world total. The trade of other Eastern European nations has been negligible. Over the 12-year period, 1925–37, the Soviet Union's share of world trade was only 1.5 percent. The volume of Soviet trade in prewar years was on the level of such countries as Sweden and Switzerland, which had populations equal to only 3.5 and 2.5 percent, respectively, of that of the Soviet Union.

Until recently, in fact, the Soviet Union has regarded foreign trade with profound suspicion, holding it to be an instrument of potential penetration and economic disruption. Although the Soviet Union was interested in importing capital goods, raw materials, and other necessities both to satisfy her 5-year plans and for stockpiling, it did not want to export beyond what was necessary to pay for desired imports and such exports were to be on as low a level as possible. Prior to World War II the Ministry of Foreign Trade voiced official approval of the fact that whereas the Soviet Union ranked 2d among the nations of the world with respect to industrial production, it stood 19th with respect to foreign trade. This deep-seated suspicion of foreign trade reasserted itself after World War II.

Western Europe has for many years imported more goods than it has exported. It depends much more heavily on foreign trade than does the United States. Not being self-sufficient in all items, Western European countries must trade. Most of Western European trade is with the free world, but some trade is conducted with Eastern Europe. From the Communist bloc countries Western Europe has received coal, bread grains, foodstuffs, and timber. Most Western European countries desire to sell to Eastern Europe manufactured goods, machinery, and vehicles which cannot be sold readily in other parts of the world.

The following table shows how much more reliant the nations of Western Europe are upon international trade than is the United States. The data are in current prices.

TABLE 63.—*Exports and imports as percentages of gross national product, by regions, 1938, 1948, and 1952*

Country	1938		1948		1952	
	Imports	Exports	Imports	Exports	Imports	Exports
Austria			16	8	20	17
Belgium			32	32	40	42
Denmark	26	28	21	20	30	31
France			12	9	15	14
Germany (Federal Republic)	[1] 17	[1] 17	[2] 11	[2] 8	16	19
Greece	19	16	23	7	16	8
Iceland	46	50	38	35	44	39
Ireland	27	27	41	33	40	36
Italy	9	8	14	11	16	13
Netherlands	31	34	38	31	46	54
Norway	29	30	39	33	43	42
Portugal	16	9	27	13	22	18
Sweden	[3] 19	[3] 19	19	18	23	24
United Kingdom	18	17	20	20	25	26
Canada	23	25	24	27	23	24
United States	4	5	4	6	4	5

[1] 1936.
[2] 1949.
[3] 1938-39.

NOTE.—Exports include factor income receipts; imports include factor income payments.

Source: Organization for European Economic Cooperation, Statistics of National Product and Expenditure, 1938, 1947 to 1952. Paris, 1954.

As is evidenced by the table, almost all nations are equal to or higher than prewar in the proportion of their gross national product which can be attributed to exports and to imports. Western European nations have been hampered by trade restrictions, both on trade in general and in trade with Eastern Europe, by the disruptions of the war, by the cold war, by the Korean conflict and by currency difficulties. By 1952, as stated above, the imports and exports of practically every nation had reached or surpassed the 1938 level.

PREWAR TRADE

Before the war the countries of Eastern Europe had closer ties with the countries of Western Europe than they did with each other. About one-half the trade of Bulgaria, Hungary, and Rumania was with Germany and Austria. A large part of the trade of Poland, Czechoslovakia, and the Soviet Union was also with Western Europe. The greater part of the imports of Eastern Europe came from Western European countries, and, considering the Eastern European countries as a single unit, about 70 percent of their exports were directed westward. On the other hand, only about 10 percent of the exports of Western Europe were destined for Eastern Europe. The interests of Austria, Germany, Italy, and Switzerland in Eastern European trade were considerably greater than those of other western countries. Trade with Eastern Europe accounted for 33 to 38 percent of the total trade of Austria, for 16 to 18 percent of the total trade of Germany, for 11 percent of that of Switzerland and for 9 to 12 percent of Italian trade. Turkey and Sweden relied on Eastern Europe for more than 15 percent of their total trade.

The percentage of total trade of Eastern Europe and the Soviet Union that went to Western Europe in 1938 was as follows: [44]

	Exports	Imports
Soviet Union	72	52
Eastern Europe	67	59

Eastern Europe accounted for 9 percent of all imports into Western Europe, and for 6 percent of that area's total exports in 1938.

Germany (the prewar boundaries) accounted for about one-third of Western Europe's trade with the countries of Eastern Europe in 1938. Approximately 85 percent of Germany's total trade with the eastern area was with the captive countries, Finland and Yugoslavia (not members of the Soviet bloc). The United Kingdom was the second largest trader, accounting for about 27 percent of the commodity imports of Western Europe from Eastern Europe and more than 22 percent of the exports to Eastern Europe.

Although small in terms of monetary value, the imports from Eastern Europe were extremely important to Western Europe. Food products, timber (principally from Finland and the Soviet Union) and Polish coal were the most significant items. Food and timber exports of Eastern Europe to all the world are shown in the following tabulation: [45]

Exports of food and lumber to all countries in 1938

Country:	*Percent of total exports*
Bulgaria	90.8
Hungary	51.2
Poland	52.2
Rumania	44.2
U. S. S. R. (1937)	48.4

Rumania also exported large quantities of petroleum and petroleum products which, in the late thirties, amounted to about 40 percent of all Rumanian exports. About 20 percent of Poland's exports consisted of coal.

Bread grains and flour, coarse grains, sugar and meat were the principal foodstuffs imported by Western Europe from Eastern Europe, but butter, eggs, canned fish, and dead poultry were also important, especially to the United Kingdom.

Czechoslovakia was particularly important for the export to Western Europe of manufactured items, chiefly consumer goods.

Finland and Yugoslavia (included with Eastern Europe in 1938) exported 86.5 percent and 62.5 percent, respectively, of their total exports as food and lumber.

The great bulk of the imports into Eastern Europe in 1938 consisted of finished goods (chemicals, textiles, metals, machinery) which, as is

[44] Halpern, D. B., European East-West Trade and the United Kingdom's Food Supply, Economic Journal, vol. LXI, March 1951, p. 105. This prewar trade discussion is based largely upon Halpern's study, supplemented by Daniel Marx, Jr., Economic and Political Factors Affecting Trade Between Eastern and Western Europe, Political Science Quarterly, vol. LXVI, June 1951, pp. 161–190. These articles are particularly useful for prewar and the situation up to 1951.

[45] U. S. Congress, House, Select Committee on Foreign Aid: The East European Economy in Relation to the European Recovery Program, in Final Report on Foreign Aid, Washington, Government Printing Office, 1948, p. 360.

shown in the accompanying tabulation, accounted for well over half of total imports.[46]

Imports of finished goods (chemicals, textiles, metals, machinery) as percent of total imports in 1938

Country:		Country—Continued	
Bulgaria	77.9	Poland	65.6
Czechoslovakia (1937)	57.0	Rumania	[2] 74.6
Finland [1]	[2] 52.2	Yugoslavia [1]	68.8
Hungary	[2] 28.4	U. S. S. R. (1937)	[2] 57.1

[1] Included with Eastern Europe in 1938.
[2] Minimum figure; available breakdown of imports is incomplete.

POSTWAR TRADE

Since the end of World War II, the Soviet Union has worked consistently to enlarge the power and extent of the Communist world. She has attempted to orient the trade of her captive countries to their sister states in Eastern Europe and to China. Only recently, because of unrest in some of the captive countries, has the Soviet Union become interested in trade with the Western European countries and with the free world, particularly with respect to consumer goods. For many years the Soviet Union has sought to make herself, and particularly since World War II, the rest of the Communist world, self-sufficient. Although she has found it necessary to trade with Western Europe in order to obtain certain capital goods, this trade has diminished as her own industries have developed. She has tried to provide markets for the products of the captive nations in order to discourage their interest in trade with the West.

During World War II all of the countries of Eastern Europe, except the Soviet Union, were conquered by or cooperated with Germany, and suffered tremendous losses in consequence. Since the close of the war, the Soviet Union has made it part of her policy to maintain governments in those countries favorable to the Soviet. Part of this policy has been the Soviet Union's constant attempts to weld the nations together into a tightly knit financial and trading bloc. In 1946, for example, the Soviet Union imported about 14 times as much from Eastern Europe, and exported to them about 4 times as much, as she had in 1938. This expansion was brought about primarily by the destruction of Germany and the difficulty of reestablishing prewar connections in Western Europe. Eastern European countries wanted to rebuild their war-ravaged economies and, in consequence, were interested in trading with any nation that could help them. From 1947 to 1949 trade with the West (including the United States) expanded, but since January 1949, when the Council for Mutual Economic Aid (discussed below) was founded, it has declined considerably.

The effect of the announcement (in 1947) of the Marshall plan and the beginning of the European recovery program in 1948 was to split Europe into two camps: one dominated by Moscow; the other composed of Western European nations led by the United States. With the beginning of Marshall aid to Western Europe, the Soviet Union began a counterprogram by signing a series of economic agreements

[46] Ibid., p. 361.

with her captive nations. Soviet leaders spoke of a "Molotov plan" as a countermeasure to the Marshall plan.

In January 1949 the Soviet Union and five captive countries signed a protocol for the organization of a Council for Mutual Economic Assistance (CEMA), usually called COMECON, which is presumably the Kremlin's answer to the Marshall plan and the Organization for European Economic Cooperation. Albania and East Germany adhered to the organization at a later date. This Council was founded to act as a channel through which the captive nations could assist in the reconstruction and expansion of the economic potential of the Soviet Union; to promote the industrialization of Communist bloc countries; and to assist in the redirection of foreign trade of the Communist bloc nations toward the Soviet Union and within the bloc.

One of the means of Soviet exploitation of the Soviet bloc has been the granting of Soviet loans to Albania, Poland, Czechoslovakia, Bulgaria, Rumania, and East Germany. These loans were of two general types: (1) Gold and foreign exchange for trade purposes, and (2) credits granted for deliveries of industrial equipment. Information regarding the loans and credits is scanty. Following is a list which has become known to the public: [47]

Country	Date	Amount
Albania [1]	July 1947	Amount not specified.
	Sept. 3, 1948	Do.
	Apr. 10, 1949	Do.
	Feb. 17, 1951	Do.
Bulgaria	Aug. 23, 1947	Several million leva.
Czechoslovakia	December 1947	1,150,000,000 koruna ($200,000,000); 150,000,000 koruna specified as interest in advance.
	November 1948	$38,000,000 (estimate) amount actually withheld.
East Germany	2d half 1953	485,000,000 rubles ($121,500,000).
Poland	March 1947	$28,800,000.
	January 1948	$450,000,000 (this figure seems excessive).
	March 1948	$100,000,000 (apparently an addition to the above loan).
Rumania	Feb. 20, 1947	$10,000,000.

[1] It is not definitely known whether these are separate agreements or continuation of the same agreement.

These loans enabled the countries of Eastern Europe to import from the Soviet Union some of the capital goods and raw materials necessary for their industrialization programs. They appear to have been granted by the Soviet Union because of the disruption of the trade patterns of the captive countries. It is difficult to assess the role of these grants and credits without more information about relative prices than is available, but their primary purpose seems to have been the consolidation of the Soviet Union's position as leader of the Communist bloc.

An interesting sidelight on the necessity of loans to the captive countries is the possible sources of financing which the Soviet Union might have used. Eastern Germany has agreed to pay reparations amounting to $210 million annually from 1950 to 1965. These reparations are presumably payable in 1938 dollars which would about double the figure. These payments alone would more than care for the annual Soviet credits to the captive countries. Other possible sources of fi-

[47] Supplied by European Division, Department of Commerce. B. H. Kerblay, The Economic Relations of the U. S. S. R. with Foreign Countries During the War and in the Postwar Period, Bulletins on Soviet Economic Development, No. 5 (series 2), March 1951, pp. 14–15.

nancing are (through 1953) reparation payments by Hungary and Rumania and exports of products by Soviet-owned and Soviet-controlled corporations in the captive countries. Whether these sources have actually been employed has not been made public.

Another means of Soviet domination of economic life of the captive nations has been the mixed or joint (Sovrom)[48] company. Sovroms were companies of the Soviet Union and the captive countries, which were supposedly run on a 50–50 basis, with each partner making equal contributions and having an equal share in management and profits. These companies first appeared in 1945 in Hungary, Bulgaria, and Rumania following broad general agreements of economic cooperation with the Soviet Union. The great bulk of the capital contributed by the Soviet Union consisted of captured German assets or captive country properties it had acquired as reparations. The form of organization of the corporations was as follows:

The board of directors was composed of equal numbers of Soviet citizens and of citizens of the captive country. The chairman of the board was a citizen of the captive country; the vice chairman was a Soviet citizen. The general manager was a Soviet citizen; his assistant a citizen of the captive nation. The fact that the general manager was in charge of the daily operations of the company shows the pattern of Soviet control.

Rumania was forced to accept more of this type of business organization than Bulgaria and Hungary. Sovroms were firmly entrenched in all key sectors of the Rumanian economy as the following list attests:

Title and Industry
Sovrompetrol: Oil.
Sovromtransport: River transportation and shipbuilding.
Tars: Civil aviation.
Sovrombanc: Finance.
Sovromlemn: Forestry.
Sovromgaz: Methane gas.
Sovromcarbune: Coal.
Sovromchim: Chemistry.
Sovromconstructie: Building.
Sovrometal: Steel (heavy industry).
Sovromtractor: Tractor (heavy industry).
Sovromfilm: Film.
Sovromasigurare: Insurance.
Sovrom Utilaj Petrolifer: Crude oil processing and drilling equipment.
Sovromnaval: Shipbuilding and repairs.
Sovromquartz: Uranium.

The first five companies were formed in 1945–46; then no more were formed until in 1948 and 1949. The last three listed were formed in August 1952.

The development of joint companies in Hungary and Bulgaria was on a much smaller scale than in Rumania, although their structure was similar. In Hungary, similarly constituted companies represented Soviet interests in river navigation, civil aviation, bauxite mining, aluminum production and processing and oil properties. The Soviet Government has gained control over the Hungarian Credit Bank, but that is apparently outside the terms of formal agreements.

[48] Sovrom is actually the title for joint companies in Rumania only. It is used here to characterize the joint company regardless of geographic location.

In Bulgaria there were five companies, the Bulgarian-Soviet Mining Co. for uranium, Gorubso for exploitation of ores, oil, lead, zinc, and silver, Sovbolstroi for construction of industrial plants and worker housing projects, Tabso for civil aviation, and Korbso, with a monopoly of all shipyards in Stalin, Burgas, and Russe.[49]

Between September 18 and November 6, 1954, the Soviet Government announced the liquidation of all mixed companies except Sovrompetrol (Rumania). Free world sources attribute this action to Chinese pressure.

The Soviet Union has had an important objective of increasing its own trade with the captive countries, and, secondarily, of increasing trade among these countries to the exclusion of Western Europe. Soviet trade statistics indicate that 75 percent of the foreign commerce of the Soviet Union was with China and the captive countries in 1951. In 1952 it reached 80 percent. The volume of Soviet trade with countries of the Communist bloc tripled between 1938 and 1951 and the Soviet Union now carries on more than 50 percent of the intrabloc trade, whereas in prewar years it did little more than 20 percent. As indicated above, this type of trade was negligible before World War II. Soviet sources show that the relative share of trade of the Soviet bloc countries increased from 12 percent of the total trade of these countries in 1937 to 65 percent in 1951.

TABLE 64.—*Trade within the Soviet bloc,*[1] [2] *1938–53*

[In percentage of each country's total external trade]

	1938	1948	1949	1950	1951	1952	1953
Czechoslovakia	17	32	46	55	61	71	78
Poland	7	41	43	59	58	67	70
Rumania	17	71	82	83	80	85	84
Hungary	15	34	46	61	67	71	77
Bulgaria	15	78	82	89	92	89	86
U. S. S. R.	9	42	61	66	75	80	80+
Albania	[3] 5	38	[4] 100	100	[4] 100	[4] 100	[4] 100
East Germany	[3] 12	41	51	63	78	80	80+

[1] Trade with other Eastern European countries, with the Soviet Union and with China.

[2] Ivanov, N., Ekonomicheskoe Sotrudnichestvo S. S. S. R. so Stranami Narodnoi Demokratii, Vneshaia Torgovlyia 11, 1953 for the captive countries in all years and for the Soviet Union in 1952; Economic Bulletin for Europe, vol. 2, No. 2, 2d quarter 1950 and vol. 3, No. 2, 2d quarter 1952 for the Soviet Union in 1948–50. Albania and East Germany for all years may be found in Stephan Schattmann's Trade Behind the Iron Curtain, The Banker, vol. CI, December 1953, p. 363. Schattmann's percentages are somewhat different for the other Eastern European countries, but the discrepancies are not significant.

[3] 1937.

[4] Soviet data. Free world sources indicate small amounts of trade with Albania in these years. In 1952, for example, 57 countries reported exports valued at $73,000 and 65 countries reported imports valued at $83,000 from Albania. Yugoslavia did not trade with Albania in 1952.

NOTE.—It is not known how prices for intra-area trade compare with world prices, and therefore whether the percentages shown accurately reflect changes in the distribution of trade. However, the general trend as well as orders of magnitude are unmistakable.

As the level of world prices has risen considerably during the period 1938–53, the volume of trade of the Communist bloc with the free world has probably fallen by about 65 percent. Following are the trade figures of Western Europe with Eastern Europe (unadjusted for price changes):

[49] This discussion is based largely on the following sources: Sovroms, News from Behind the Iron Curtain, vol. 3, September 1954, pp. 16–22; U. S. Cong. House. Select Committee on Foreign Aid. Final Report on Foreign Aid, Washington, GPO, 1948, pp. 388–392; Grzybowski, Kazimierz, Foreign Investment and Political Control in Eastern Europe (reprint from Journal of Central European Affairs, April 1953), pp. 19–26; Bronislaw E. Mateckl, Foreign Trade in the People's Democracies of Central and Eastern Europe, New York, National Committee for a Free Europe, 1952, pp. 16–17. An extremely useful scholarly discussion of the technical organization and historical (as well as current) aspects of Soviet economic policy in this field may be found in Nicolas Spulber, Soviet Undertakings and Soviet Mixed Companies in Eastern Europe, Journal of Central European Affairs, vol. XIV, July 1954, pp. 154–173.

TABLE 65.—*Trade of Western European countries with Eastern Europe, 1938 and 1953* [1]

Year	Exports	Imports
1938	$703,980,000	$921,210,000
1953	646,800,000	733,300,000

[1] Organization for European Economic Cooperation: Statistical Bulletins. Series 1, Foreign Trade. Paris, OEEC, September 1954, pp. 34–35.

Although most countries' exports to Eastern Europe declined significantly, the exports of Denmark, Norway, and Finland (considered separately) are important exceptions. Of Western European countries, the volume of exports from Denmark and Norway rose from $16,500,000 in 1938 to $75,860,000 in 1953. Dairy products, fish, whaling products, and transportation equipment were the chief exports. Finland's exports increased from about $15,300,000 in 1938 to $182,348,000 in 1953.

Imports of Denmark and Norway from Eastern Europe fell 30 percent between 1938 and 1953. Finland exported 3 percent of her total exports to Eastern Europe in 1938 and 9 percent of her total imports came from there. In 1953 the ratios had risen to 31.4 and 34.4 percent. Sweden's exports to Eastern Europe declined by $51 million in 1953 over 1952. She imported $96,900,000 worth of goods in 1953 compared with $39,030,000 in 1938.[50]

The trade policy of the Soviet Union, and perforce that of Eastern Europe, has had a twofold purpose: (1) To strengthen the Eastern European bloc, both economically and politically; and (2) to disrupt the economies of the free world as much as possible.

Fear and distrust of the free exchange of goods among nations has induced the Soviet Union to force her captives to trade as little with Western Europe as possible. Foreign commerce has been controlled by the formation of state trading agencies in the captive countries having a monopoly of foreign trade. In attempting to prevent contacts with Western Europe, the Soviet Union has reinforced her control over Eastern Europe with a series of 5-year intrabloc trade agreements which augment the state trading monopolies. Payments and credit agreements have made trade much easier between Eastern European countries than between East and West. The absence of East European countries from the European Payments Union, the trade-liberalization program of the Organization for European Economic Cooperation, and the United States program of economic aid to Europe made relations more difficult. Furthermore, changes in the economic structures of Eastern Europe countries have reduced the volume of surplus mining, forest, and agricultural products which are available for trade with the West. The emphasis upon industrialization in Eastern Europe has meant the shifting of domestic resources from agriculture to industry and the cutting of imports of consumption goods and the substitution of imports of capital goods and raw materials, many of which are items of strategic value subject to embargo by the nations of Western Europe.

The Soviet Union, however, has not found it possible to rely upon the Communist bloc for all of her needs. She must trade with the

[50] Ibid., pp. 108–109. These figures compare closely with Department of Commerce estimates.

countries of Western Europe for capital equipment and for some raw materials, such as rubber, lead, tin, copper. She has found it necessary to allot some of her production of capital equipment to the captive countries in order to minimize their trading with the West. Her production of about 689,000 tractors in 1946–50, for example, was only 5 percent short of the goal, but, because of diversion of tractors from the Soviet Union to intrabloc agriculture, about 536,000 units were received in the Soviet Union instead of the 725,000 promised by the 5-year plan, a shortfall of 26 percent. The Soviet Union was hampered by a shortage of export capital during the years 1946–50.

It is not known on what precise date the Communist bloc decision to encourage East-West trade was made, but sometime in 1951 primary emphasis was shifted to the broadening of the scope of international trade on the basis of removing obstacles to trade between the East and West.

The International Economic Conference, which was held in Moscow in April 1952, was, in some respects, a sign of Soviet interest in trade relations with Western Europe. It seems also to have been directed largely against the trade restrictions imposed by the United States and against the point 4 program. Contracts for trade signed during the meeting made acceptance of consumer goods trade contingent upon the shipment of strategic items to Eastern Europe and thus fell afoul of the strategic export control laws of Western Europe.

In line with this policy of cooperation the Soviet Union and the captive countries have signed a number of bilateral trade agreements with Western European nations. The first quarter 1954 issue of the Economic Bulletin for Europe lists the following number of trade and payments agreements between Eastern and Western European nations (as of June 1954).

	Agreements		*Agreements*
Bulgaria	14	Poland	16
Czechoslovakia	15	Rumania	12
Eastern Germany	13	U. S. S. R	13
Hungary	15		

The Soviet Union alone has completed the following trade agreements with Western European nations since June 1954 (for earlier agreements see appendix).

On July 18, 1954, announcement was made of a Finnish-Soviet pact, which had been signed the day before. The agreement projected the increase of Soviet imports from Finland from $145 million in 1954 to $147.5 million in 1956. A long-term agreement called for their progressive increase to $160 million in 1960. Soviet exports are to be $40 million a year less than her imports. Finland's exports to the Soviet Union are to be products of the shipbuilding, engineering, cable, and other branches of the metalworking industry; prefabricated houses; sawn timber; pulpwood; cellulose, paper, and cardboard and paper goods. Her imports from the Soviet Union are to consist of cereals, sugar, fodders, synthetic fertilizers, liquid and solid fuel, metal, rolled metal, cotton, chemicals, and furs.

On October 2, 1954, the Soviet Union and Yugoslavia signed a short-term trade agreement on a barter basis for the exchange of nonstrategic materials. The trade pact, which is valid until the end of 1954, called for Yugoslavia to export meat, tobacco, ethyl alcohol,

hemp, and calcium soda in exchange for crude oil, cotton, manganese, and newsprint. No estimate of the total value of goods to be exchanged was given.

Britain and Hungary also signed a trade pact August 19, 1954. The agreement called for the exchange of £10,500,000 ($29,400,000) in food and goods for the 12 months, September 1, 1954–August 31, 1955. The United Kingdom will export £5,000,000 ($14,000,000) worth of wool tops, rayon yarns, pharmaceuticals, machinery, vehicles, tinplate, and electrical equipment to Hungary. From Hungary the United Kingdom will get £5,500,000 ($15,400,000) worth of tomato puree, rice, eggs, canned meat, bristles, and manufactured goods.

Since the Economic Commission for Europe discussions of East-West trade in April 1953, the Soviet Union and her captive countries have been much more successful in trade policy largely because consumer goods in limited quantities have been listed in most of the trade agreements undertaken. This apparently has been done with a twofold purpose: (1) in order to get strategic and semistrategic items it has proved necessary to accept some consumer goods; and (2) because of its propaganda value in Western Europe. With the death of Stalin there appears to be concern over the plight of the consumer.

Beginning about October 1953, the Soviet Government began shipping gold to London, Zurich, and Amsterdam. Although there is much diversity of opinion, many competent European authorities seem to think that one reason was an internal crisis in the Communist bloc. The shrinkage of East-West trade in recent years would seem to indicate that the countries of the Communist bloc have not sufficient surplus commodities to pay for increased imports from the West; hence, the shipment of gold, manganese, platinum, oil, chrome, and some machinery. Gold, however, seems to be the only commodity that the Communist bloc can offer in abundance. It seems likely, therefore, that increasing quantities will be shipped to Western Europe in payment for consumer goods, ships, and whatever else the Communist bloc can entice the free world to ship to them. Various estimates have placed the shipments in 1953 at $150 million to $200 million. The Soviet Minister of Trade, A. I. Mikoyan, has indicated that future buying of consumer goods from non-Communist countries may be in the neighborhood of $330 million annually. Present indications are that a substantial part of this amount would have to be paid for in gold.

BALANCE OF PAYMENTS

In prewar years the portion of Eastern Europe now in the Soviet orbit had a trade surplus with Western Europe which was used to finance imports from primary producers and from the United States, and also to service loans. In postwar years the Communist bloc has had a favorable balance with Western Europe and with the United States which has been used to finance purchases from primary producing countries, particularly in the sterling area. Eastern bloc countries maintain balance in their trade with most OEEC countries by virtue of the bilateral treaties which they have negotiated with them. Reparations payments (until 1953) prevented large deficits in Soviet Union trade with Finland. In 1953, the Soviet Union made fairly large shipments of gold, platinum, and silver to Western Europe in spite of the fact that the United Kingdom deficit with the

Soviet Union rose by $42 million, i. e., from $89 million to $132 million. As stated above, estimates of Soviet gold sales range from $150 million to $200 million. One author traces this action to the fact that in 1953 the Eastern bloc had a deficit with OEEC countries other than the United Kingdom for the first time, that the Swedish loan of 1946 ran out in 1953, that the surplus with the dollar area declined in 1953 and that East European orders increased at the end of the year.[51]

Eastern European balance of payments figures are difficult to ascertain. The Bank for International Settlements in its latest report states:

> The significance of the exchange rates of Eastern European countries is unknown, since there is virtually no information about trade and payments in these countries. What is known is that all Eastern European currencies, except that of Albania, are now theoretically linked to the ruble by gold; but this does not in itself mean that a system of multilateral payments has been put into operation.[52]

Some authors have speculated that the Soviet Union has built up a trading area similar to the sterling area.[53] Opinions differ as to whether this is true.

Although some authors maintain that there is complete transferability of ruble balances between members of the Communist bloc, there is certainly no transferability or convertibility into western currency or gold.

Following is a tabulation of available balance of payments figures for Communist-bloc countries:

[Millions of currency units]

Country	Years	Currency	Exports	Imports	Surplus of exports (+) or imports (−)	Surplus (+) or deficit (−) of service item	Surplus (+) or deficit (−) on current account
Bulgaria	1938	Leva	5,580	4,930	+650	.....	.....
	1946		14,490	17,510	−2,570	.....	.....
	1947		24,530	21,420	+3,110	.....	.....
	1948		26,200	32,000	−5,800	.....	.....
Czechoslovakia	1937	Koruna	11,972	10,989	+983	−583	+400
	1946		14,283	10,308	+3,975	.....	.....
	1947		27,980	[1] 33,480	−5,500	+2,250	−3,250
	1948		37,648	37,716	−68	.....	.....
Hungary	1938	Pengo	522	411	+111	.....	.....
	1946	Forint	420	371	+49	.....	.....
	1947		1,042	1,453	−411	.....	.....
	1948		1,933	1,975	−42	.....	.....
Poland	1938	United States dollar	224	245	−21	.....	.....
	1946		127	146	−19	.....	.....
	1947		248	317	−69	.....	.....
	1948		480	540	−60	.....	.....

[1] Bank for International Settlements. 19th Annual Report, Apr. 1, 1948–Mar. 31, 1949, Basle, June 13, 1949, pp. 98–99. Czechoslovakia and Poland are available in more detail in International Monetary Fund, Balance of Payments Yearbook 1948 and Preliminary 1949, Washington, IMF, 1950. These tables are not used here in order to be consistent in the use of sources. Czechoslovakia is still a member of the fund, but proceedings to oust her because of failure to provide necessary information to the fund were undertaken at the annual fund meeting in Washington, D. C., September 1954. Czechoslovakia ceased to be a member of the fund at the close of business, December 31, 1954. Poland resigned from the fund in 1950.

[51] Maddison, A., East-West Trade, Bulletin of the Oxford University Institute of Statistics, vol. 16, Nos. 2 and 3, February and March 1954, p. 90.

[52] Bank for International Settlements, 24th Annual Report, April 1, 1953,–March 31, 1954, Basle, June 14, 1954, p. 132.

[53] V. L. Horoth, Trading With * * * the Ruble Area, Magazine of Wall Street, vol. 93, February 20, 1954, pp. 611–613, 638; Ruble New Political Weapon, United States News and World Report, vol. 28, March 10, 1950, pp. 52–54; Integration Behind the Iron Curtain, Statist, vol. 151, March 11, 1950, pp. 302–303; Mikhail V. Condoide, Economic Implications of Revaluation of the Ruble, Problems of Communism, vol. 1, No. 3, 1952, pp. 4–8, Stephan Schattman, Trade Behind the Curtain, Banker, vol. 101, December 1953, pp. 359–366.

The balance of payments of Albania has always been characterized by an excess of imports over exports. To pay for these excess imports the country has, in the past, relied on emigrant remittances, largely from the United States, and the tourist trade. The rest of the deficit was financed in prewar years by Italian loans. Today Albania appears to be dependent upon the Soviet Union for this financing.

The balance of payments of Finland and Yugoslavia, both of which are geographically Eastern European countries, but are not members of the bloc, follows:

Finland—Balance of payments

[Millions of markkas]

Year	Exports	Imports	Surplus of exports (+) or imports (−)	Surplus (+) or deficit (−) on service items	Surplus (+) or deficit (−) on current account
1938	8,425	8,590	−165	+575	+410
1946 [1]	23,050	24,270	−1,220	+1,850	+630
1947 [1]	46,250	46,970	−720	+1,925	+1,205
1948 [1]	56,505	66,369	−9,864		
1949 [1]	65,020	69,500	−4,480	+6,020	+1,540
1950 [1]	82,180	89,730	−7,550	+1,760	−5,790
1951 [1]	187,210	156,520	+30,690	+3,040	+33,370
1952 [1]	156,910	182,840	−25,930	+4,640	−21,290
1953 [1]	131,500	122,900	+8,600	+2,400	+11,000

[1] Excluding exports for reparations payments and commodities surrendered in compensation for German assets.

Source: Bank for International Settlements. 19th Annual Report, p. 98; 23d Annual Report, p. 117; and 24th Annual Report, p. 111 (1950–53).

Finnish reparations payments to the Soviet Union amounted to a total of 83 billion Finnish markkas—about $700 million, divided over 8 years of payments, as follows:

Finland—Reparation deliveries to the Soviet Union [1]

Year:	*Billions of Finnish markkas*	Year—Continued	*Billions of Finnish markkas*
1944	0.3	1949	13.6
1945	7.0	1950	9.2
1946	9.8	1951	14.9
1947	12.5		
1948	15.7	Total	83.0

[1] According to the Institute of Economic Research.

Source: Bank for International Settlements, 22d Annual Report, Apr. 1, 1951, to Mar. 31, 1952, Basle, June 9, 1952, p. 113.

Yugoslavia—Balance of payments

[Millions of dinars]

Year	Imports	Exports	Surplus of exports (+) or imports (−)
1938	4,949	5,047	+98
1946	1,744	2,789	+1,045
1947	8,272	8,642	+370
1948	15,782	15,112	−670
1949	14,576	9,613	−4,965
1950	11,791	7,930	−3,861
1951	12,110	9,184	−2,926
1952	73,958	111,925	[1] −37,967
1953	55,392	118,272	[1] −62,880

[1] The rise in value beginning January 1952 is due mainly to a change in the conversion rate of the dinar from 50 to 300 per United States dollar.

Source: Bank for International Settlements 22d Annual Report, Apr. 1, 1951 to Mar. 31, 1952, Basle, June 9, 1952, p. 119; 23d Annual Report, Apr. 1, 1952 to Mar. 31, 1953, Basle, June 8, 1953, p. 115; United Nations Statistical Office, Monthly Bulletin of Statistics, vol. VIII, April 1954, p. 103.

FACTORS AFFECTING EAST-WEST TRADE

The resumption of East-West trade has faced a number of retarding factors which have been instrumental in changing the emphasis of economic relations between Eastern and Western Europe. Immediately following World War II the physical devastation wrought by that conflict hampered the resumption of trade between Western and Eastern Europe in timber, foods, and fuels, as well as industrial materials. Heavy reparations absorbed a large part of the output of the former allies of Germany. Out of sheer necessity new trade patterns emerged in intra-Eastern European economic relationships. In the first few years following the war bad weather curtailed the crops available for trade with Western Europe. Production was slow in reaching prewar levels, especially in Eastern Europe. As late as 1949 the production of lumber and grains—the two largest Eastern European prewar exports—had not reached prewar levels.

Until the latter half of 1953 the settlement of balances of trade between Eastern and Western Europe in gold had been rare. Nonessential spending has been discouraged, especially in Eastern Europe, but also, to some extent, in Western Europe. Dollar markets have been available for many of the items which might have been traded. Surpluses earned by the Eastern European countries (especially the Soviet Union) in trade with the United States have not supplied a large dollar balance which might be used for payment in trade with the Western European countries.

The rapid industrialization undertaken by Eastern European countries should normally lead to large imports of capital goods from Western Europe, but Soviet policy has been to discourage the investment of funds from Western Europe in the industries of the captive nations. This has necessitated alternative financing by the diversion or reduction of Eastern European export potentialities. This program is tied in closely with Soviet attempts to make the Communist bloc an economically self-sufficient area.

Bilateral treaties have seriously restricted East-West trade. They limit the amount and the kind of trade which may be conducted. Eastern European countries have found it difficult to export enough

goods to carry on barter agreements. It has been found practically impossible to balance trade between individual countries. Soviet bloc countries have failed to live up to their promised deliveries in some cases.

Western European nations have found it difficult to deal with the state trading monopolies of the Communist bloc. Interminable problems of pricing, delivery dates, spare parts, grading, inspections, and many other difficulties continually recur.

Needless to say the strategic controls established by the United States and the countries of Western Europe have seriously hampered East-West trade. It has been strategic materials that the Soviet Union and her captive nations have been most eager to trade. So long as the cold war continues these controls will be retained and will continue to deter trade.

Politically, too, Western European nations have hesitated to become too dependent upon the products of Eastern Europe. They fear Soviet trade tactics, such as the dumping of Soviet and satellite goods until markets are ruined. Also, it has been pointed out that the Communist bloc can shift orders about from country to country in such a way as to create crisis, unemployment, and political difficulties.

Other reasons could be pointed out as factors making East-West trade relatively unimportant as a significant part of world trade, but those discussed above are perhaps the most important. A simple enumeration of the factors could be (1) Iron Curtain and (2) Battle Act and similar restrictions.

TRADE LIBERALIZATION IN WESTERN EUROPE

Western European countries have been forced to employ import restrictions since World War II. The most obvious use has been against the dollar, but there have also been restrictions against neighboring countries in Western Europe. Many nations have placed bans on the importation of luxury items. Import licenses have been required which have been granted for only limited amounts of all goods except those essential for the industry of the country. Sometimes quotas have been placed upon the importation of specified items. It was evident to all that trade must be liberalized, but that a preparatory step in the form of a payments system was necessary.

Before 1949, the OEEC countries conducted their trade with one another largely under bilateral-trade quota and bulk-purchase agreements. The creation of a multilateral-payments system as called for in the Marshall plan program did not guarantee multilateral trade.

One step, however, had already been taken. Most of the Western European nations joined with the United States and other countries in the international trade agreement which has become known as GATT (General Agreement on Tariffs and Trade). This general agreement was created primarily to afford machinery for reducing world trade barriers during the period that the proposed International Trade Organization could be agreed to and ratified. It has, in reality, become the major body of international cooperation in the field of reducing world trade barriers. Czechoslovakia is the only Soviet-bloc member of the general agreement since the withdrawal of China in 1950. The United States has adhered to the provisions of the GATT

although Congress has never officially approved United States membership in the organization.

However, as demanded by the Marshall plan, there was also a Western European program for trade liberalization. Briefly it is organized as described below.

The program of Marshall aid for the first full year, July 1, 1948, to June 30, 1949, included some $800 million to be applied to the working of the intra-European payments scheme. This action shows that the maintenance of intra-European trade was an integral part of the Marshall plan.

The European Payments Union (EPU) was founded in 1950 to operate a clearing system for intra-European payments and to provide credits for the settlement of a part of the resulting net balances, the remainder to be settled in gold on an agreed scale, to inaugurate a scheme for the liberalization of trade and to encourage the mutual discussion and settlement of internal economic and financial problems. It succeeded an earlier intra-European payments scheme which had been based on a system of bilateral and multilateral "drawing rights" linked to a corresponding firm allotment in ECA dollars to the creditor nation making the drawing rights available in its own currency.

The European Payments Union received $350 million (later increased to $361 million) allocation from the United States Government to maintain its solvency. But the monetary approach had to be supplemented with direct attacks on the jungle of trade restrictions which were in existence.

In a series of decisions in July, August, and in November 1949, the Organization for European Economic Cooperation (OEEC) determined to bring about a progressive removal of trade restrictions.

The November decision stipulated that 50 percent of trade on private account between member countries should be free. The percentage was to apply to each of three groups: (1) Agricultural products, (2) raw materials, and (3) manufactured goods. It was to be related to a base year: 1949 for Germany and 1948 for the other countries.

So successful was this stipulation that the percentage to be freed was raised to 60 percent in January 1950. This was to be effective after the formation of the European Payments Union (EPU). This obligation became effective on October 4, 1950. After that date all trade measures between the participating countries were to be on a nondiscriminatory basis.

As from February 1, 1951, it was decided to raise the liberalization of trade to 75 percent. A slight change was made in the three groups: It was decreed that no group should fall below 60 percent liberalization and that the total for all groups should be at least 75 percent. This was done primarily because of the difficulty of raising the minimum requirements in the agricultural group. This liberalization was to be completed by August 1951.

Following is a table showing the extent of liberalization as of April 1954:

TABLE 66.—*Degree of liberalization of intra-European trade* [1]

[In percentage [2]]

Countries	August 1951 (intended date for conclusion of 75 percent stage)	April 1952	April 1953	April 1954
Austria	None	None	None	65
Belgium-Luxembourg	75	75	90	[3] 87
Denmark	63	65	76	76
France	76	[4]	[4]	52
Germany	[4]	77	90	90
Greece	None	None	None	[5]
Iceland	41	41	[5]	29
Ireland	75	75	75	77
Italy	76	77	100	100
Netherlands	61	75	82	93
Norway	51	75	75	75
Portugal	83	84	93	93
Sweden	75	75	91	91
Switzerland	75	75	91	92
Turkey	63	63	[4]	[4]
United Kingdom	90	46	59	80

[1] Important measures of liberalization taken in 1953 and 1954:

Country	Date	Liberalization percentage notified
Austria	1953—July	35
	December	50
	1954—March	60
	April	65
France	1953—October	8
	December	18
	1954—April	52
Iceland	1953—October	29
United Kingdom	1953—March	59
	November	75
	1954—March	80

[2] Imports on private account free from all quantitative restrictions as a percentage of total private imports from other Western European countries.

[3] The Benelux countries have decided to put into force a common liberalization list which should cover 87 percent of their trade in 1948 (75 percent contractual and 12 percent autonomous). The date of the entry into force of the list had not yet been fixed in May.

[4] Suspended.

[5] In July 1953 Greece, acting independently, abolished all quantitative restrictions.

Source: Bank for International Settlements. 24th Annual Report, Apr. 1, 1953 to Mar. 31, 1954, Basle, June 14, 1954, p. 117.

Germany, France, and the United Kingdom have been forced to reduce the liberalization provisions undertaken. Germany found in February 1951 that her balance-of-payments difficulties could not be solved by internal credit measures alone, but circumstances permitted equilibrium to be established and by April 1, 1952, the degree of liberalization was back to 75 percent. In November 1951 the United Kingdom, faced with substantial losses of reserves, lowered the degree of liberalization to 61 percent and in February 1952 to 46 percent. By March 1954 she was able to liberalize 80 percent of her private trade with OEEC countries. In February 1952 France, facing balance-of-payments difficulties, suspended all liberalization. In April 1954 the French Government liberalized to an overall ratio of 52 percent: 65 percent for raw materials, 45 percent for foodstuffs, and 42 percent for manufactured goods.

SUMMARY

Eastern European trade with Western Europe has not reached its prewar level for a number of reasons. The most significant reason seems to be the increase of intra-Soviet bloc trade which has absorbed Eastern Europe's surpluses which were formerly imported by the Western European nations. This has made it necessary for the peoples of Eastern Europe to substitute products grown or produced within their own areas and they have become (to some extent at least) familiar with these substitute products. Economic policies and planning programs of the Eastern European countries have absorbed the surpluses above those used in intra-Eastern bloc trade. These policies have hampered agriculture, for example, by the movement of large groups of the farming population to the new industries which each country of Eastern Europe is attempting to establish. New industries, and the expansion of old industries, require many of the raw materials which were formerly used in international trade. Trade has been restricted as a counterpolicy to Western European control of the shipment of strategic materials to the Soviet bloc. Reparations have played an important part in making Finland, Hungary, and Rumania dependent upon the Soviet Union for markets. Finland, especially, was forced to establish new industries to provide Soviet demands for reparations. After the conclusion of reparations payments Finnish heavy industry was found to be too high cost to compete with other countries in Western markets.

POSSIBLE TREND OF EAST-WEST TRADE

East-West trade will probably increase in the next 10 years barring war. Estimates have been made that it might rise as much as $300 million a year, but that figure seems excessive. There seems to be little prospect of large increases in Eastern European exports to Western Europe except in Soviet wheat, Soviet and Rumanian petroleum, Polish coal and timber. Soviet gold, manganese, and fur might be used to finance some trade; the great stumbling block to increased trade (without considering strategic trade controls) is the lack of means of payments by Communist-bloc countries for the imports of capital equipment, consumer goods, and raw materials that they require.

It seems inevitable that there will be some rise in East-West trade. How much depends upon both political and economic factors. The present program of autarchy in Eastern Europe makes transitory any real increase in East-West trade unless more attention is paid to the plight of consumers in the Communist bloc. Soviet policy of importing capital equipment items until a local industry can be established then cutting off imports would seem to point to eventual curtailment of much trade. The present buildup in Eastern Europe of intrabloc trade is another barrier to East-West trade relations.

The most immediate characteristics of East-West trade since World War II have been the low share of Germany in the trade, the decline in the trade of Austria, Switzerland, and Greece whose trade was chiefly with the captive nations, the growth of the trade with the Scandinavian countries (except Sweden) and the fluctuating trade

with the United Kingdom, Canada, and the United States. Following is a tabulation of Eastern Europe's trade balances:

Eastern Europe's trade balances

[In millions of dollars]

With—	1938	1948	1950	1951	1952	1953
United Kingdom	+84	+90	+90	+154	+89	+132
Rest of OEEC	+133	+258	+27	+25	+43	−31
Finland	+11	−65	−16	−44	−29	−2
Overseas sterling area		−117	−103	−119	−59	
United States and Canada	−62	−21	+58	+73	+44	+27

NOTE.—The figures are taken from the trade returns of countries trading with Eastern Europe. For the United Kingdom, OEEC Europe, the United States, and Canada, the figures are derived from OEEC Foreign Trade bulletins, series I. For Finland from Direction of International Trade, and for the overseas sterling area from Commonwealth and Sterling Area (73d and 72d Statistical Abstracts). Our definition of the overseas sterling area is a little arbitrary as it excludes the United Kingdom, Ireland, Iceland, Burma, and Iraq, but includes the Anglo-Egyptian Sudan. For the United States and Canada, the trade balance is the difference between f. o. b. imports and exports; for other areas, it is the difference between c. i. f. imports and f. o. b. exports. A plus sign indicates a favorable East European balance.

Source: Maddison, A., East-West Trade, Bulletin of the Oxford University Institute of Statistics, vol. 16, February and March 1954, p. 90.

H. Money, Banking, and State Planning

INTRODUCTION

To understand money management in Eastern Europe, it is essential to realize that Central State planning is the economic characteristic which is most different from the United States and Western Europe. As one author has defined it:

> In the Soviet context, a 5-year plan, however, is more than an estimate or forecast of production, prices, employment, and other related matters; it is a detailed order or directive to each plant, factory, mine, or farm manager with respect to what each productive unit is expected to produce and at what cost, at what price the commodity can be sold, and how many articles are to be produced.[54]

In the words of Alexander Baykov, planning presupposes:

> (1) The formulation of the aims pursued by the plan.
> (2) The existence of planning machinery.
> (3) The knowledge of what exists, that is, of the conditions prevailing at the start, of their elements and interdependence which will serve as a basis for the plan.
> (4) The drafting of the plan, i. e., the embodiment of the general aims in concrete tasks, the fulfillment of which will result in the plan itself being fulfilled.[55]

These four conditions allow for the *drawing up* of a plan, but do not assure that it will be carried out.

The following conditions are necessary to make planning effective:

(1) The decision of the authority in power to carry out the proposed plan, i. e., the official approval of the plan and the issue of instructions and orders to put it into effect.

[54] Condoide, Mikhail V., The Soviet Financial System: Its Development and Relation With the Western World, Columbus, College of Commerce and Administration, Ohio State University, 1951, p. 9.
[55] Baykov, Alexander, The Development of the Soviet Economic System, Cambridge, Cambridge University Press, 1946, p. 423.

(2) The means of enforcing the execution of the plan, which must include the possibility of controlling the course of its fulfillment and of imposing penalties for failure to carry out orders issued by the planning authorities.[56]

In the discussion which follows the most attention will be focused on the Soviet Union since that is the model for all planning systems in the Communist bloc.

Other than to list them, little attempt will be made in this section to discuss in detail the measures employed by the Soviet Union to enforce compliance with its economic program.

The economic machinery and controls utilized today by the Soviet Union to secure compliance include:

1. The development of economic policies and the coordination of economic operations by the Presidium (formerly Politburo) of the Communist Party, exercised through the Economic Council of the Council of Ministers in peacetime and the State Defense Committee in time of war.

2. General economic planning by the State Planning Committee of the Soviet Union and substitute organs in the production ministeries and the Union Republics.

3. Economic mobilization planning by the ministries of the armed forces and their research institutions, implemented through special departments in every economic enterprise, which earmark personnel and facilities for immediate transfer to the armed forces, and which prepare the remaining resources for conversion to military production.

4. An elaborate program of research, development, and standardization under the direction of the Academy of Sciences of the Soviet Union, the All-Union Committee of Standards, and the State Committee for Construction Affairs.

5. Extensive direct controls of labor, embracing an informal passport system covering all residents of urban and "sensitive" rural areas, an allocation of urban housing space solely to employees in given enterprises, and the reinforcement of minimum hours of work and labor discipline through legal penalties, fines, and imprisonment for violations.

6. The assurance of minimum agricultural supplies for the elite and the armed forces by a system of state farms and for the urban population generally by forced deliveries at nominal prices from collective farms.

7. The control of scarce resources (metals, fuel, electrical power, etc.) through a system of allocations.

8. An enormous sales tax (up to several hundred percent) permits tight regulation of consumer demand.

9. The capital market is monopolized by centralized state institutions, and this monopoly is enforced by prohibition on loans by both private citizens and state trusts.

10. No less than six overlapping and, to a considerable degree, competing organizations have the authority for the overall inspection, surveillance, and punishment of economic bodies.

11. Nevertheless, quasi-legal and frankly illegal activities are an integral part of the Soviet economy. Hoarding, the import of over-quota labor by contracts with collective farms, rather than through

[56] Ibid.

direct employment, passport forgery, and black-market dealings are often the only ways in which managers can meet their goals.

In a report of limited length, it is impossible to do much more than mention these aspects of economic planning and control. Only those measures are treated in this section which affect directly money, banking, the national accounts, and foreign exchange.

The state planning committee (Gosplan) of the Soviet Union has general supervision of the national economic plan. It receives general directives from the central committee of the Communist Party and the party congresses. On these it bases its 5-year and annual plans. There are various levels of planning down to the individual plant, but each level largely carries out the orders of the next higher echelon of industrial organization.

Since 1953 there has been a definite movement in the Soviet Union and in the captive countries to decentralize planning. The commodities directly allocated by the central government in the Soviet Union have been drastically cut. Many quarterly and monthly plans have been abolished. Thousands of decisions formerly made on the national level are now made by local organizations. Czechoslovakia has most closely approximated the Soviet Union in this program.

A total economic plan includes many parts. One author has divided the economic plan into 14 divisions which cover the whole economic activity of the Soviet Union.[57] Broadly speaking, these may be divided into five (general) classifications: (1) Production, costs, employment, and wages; (2) capital investment; (3) state budget; (4) credit plan; and (5) cash plan. The output plan sets goals for the provision of goods and services. There are also a financial plan for the economy and budgets for capital and labor. Each of these plans is a division of the economic plan.

The financial plan (which is most closely connected with money management) is really the production plan expressed in terms of money value. There are three parts to the financial plan: (1) The credit plan; (2) the cash plan; (3) the budget. The functions of the plans are as follows: (1) The credit plan governs the granting of short-term and long-term credits by the banking system to industry and to other enterprises; (2) the cash plan regulates the amount of currency that the state bank is authorized to issue with the aim of keeping it in line with currency needs; and (3) the Government budget which attempts to balance receipts and expenditures the same as the budgets of the free world. It differs from the United States budget and those of Western Europe in that it applies to a much larger proportion of the economy.

Economies of the captive nations have changed to the same general type of planned economy as the Soviet Union.

In Western Europe, on the other hand, planning is not the dominant factor in the economy. True, there is much planning, in capital investment especially, but the planning programs of Western Europe do not specify a program for the entire economy stipulating how much will be produced, what the prices will be, where labor can and cannot work, etc.

An interesting facet of planning as practiced in Eastern Europe is the difficulties faced by individual firms in attempting to meet their

[57] Schwartz, Harry, Russia's Soviet Economy, New York, Prentice-Hall, 1954, pp. 161–162.

production goals. As one author has pointed out, each firm faces 3 problems in attempting to reach its planned production: (1) Perennial commodity shortages; (2) an irrational price system; and (3) complex administrative controls over many detailed aspects of the firm's activity.[58]

Each firm strives to build a safety factor in all parts of its plan so that its whole resources will not be required to meet the planned output. There are numerous ways in which this can be achieved, such as an overstatement of the resource needs, holding back production over that required, padding of estimates, hoarding of materials, etc.

A second difficulty is what Berliner has called simulation, i. e., the practice of simulating successful performance by deceptive devices such as producing the wrong assortment of products, falsifying accounting of goods in process, lowering the quality of output and misappropriation of funds.

Third, the use of personal influence to obtain favors to which the person or firm is not entitled, called blat.[59] This practice is most important in industrial procurement. The state or its agencies allocate most major commodities; by 1950, over 1,500 commodities were directly allocated in that manner. Each consuming firm receives an allocation order which it must present to the producer before he (the producer) can sell the specified amount of materials to the consumer. It is here that blat enters the picture. By using blat a firm may get more products than specified by the plan; if it has no allocation order procured through regular channels it may be able to get needed items; and it may obtain part of its requirements if it has no allocation order. Blat is also used to achieve priority over other firms. Blat has been described as follows:

> Blat plays a role not only in procurement, but in obtaining easier production tasks, in facilitating financial operations, in inducing inspectors to be generous, etc. Blat plays an even greater role in the personal enrichment of people and in gaining private unlawful privileges than it does in the operation of the firm. It is an essential thread in the fabric of society.[60]

BANKING SYSTEMS

The banking structures of Eastern Europe are in many respects similar to those of the free world. They differ from the central and commercial banks in free countries in that their activities are dictated by the economic plan.

Strictly speaking, there is no central banking in the Communist bloc. Central banks there exercise some of the functions which have come to be accepted as the attributes of central banks such as note issue, the almost exclusive administration of foreign exchange, etc. But the central banks are also the commercial banks in Eastern Europe so that they do not have one of the distinguishing characteristics of free world central banks, the safekeeping and management of the reserves of the commercial banking systems.

Nor is there monetary management by the central banks of the Communist bloc nations, at least in the conventional sense of the term. The central bank has little or no influence over the money

[58] Berliner, Joseph S., The Informal Organization of the Soviet Firm, Quarterly Journal of Economics, vol. LXVI, August 1952, p. 353.
[59] Blat (pronounced blaht) is untranslatable.
[60] Berliner, op. cit., p. 358.

supply through the cost of credit and the volume of reserves of the banking system. This, of course, requires a market mechanism which is missing from the Communist bloc. There is, in the Soviet bloc, monetary planning through the financial plan (described above) rather than monetary management.

Eastern European banks have little power to determine their own policies and operations; their activities are shaped in such a way that they synchronize with the economic and sociopolitical life of the country.

One author has described the Soviet banking system as follows:

> In its essence, the organizational structure of the Soviet banking system is a simple one, paralleling closely the functional subdivision of financial tasks:
> 1. Note issue, commercial banking services to economic entities and to the state treasury, and financial relations with foreign countries are performed by the state bank (Gosbank).
> 2. Long-term investment of funds is undertaken by the four so-called special banks, each serving its own sector of the economy.
> 3. Banking and similar services to individuals are furnished by the network of savings banks.[61]

The other economies of Eastern Europe have established banking systems similar to that described above.

Banking's role in the Communist bloc is to secure the financial means necessary to insure the functioning of the plan and at the same time to supervise implementation of the plan through financial control, i. e., to make credit available and to insure the repayment of that credit.

The interest rate does not serve the same purpose in Eastern as in Western Europe where it functions as a regulator of the volume of credit and currency. The purpose of the interest rate in the Soviet bloc nations is to permit the banks to limit excessive borrowing by the socialized enterprises and to earn income to cover their operating expenses as well as to accumulate reserves. Interest also is paid, as in the free world, to encourage individuals to save and to stimulate investment in state bonds by banks and by individuals. State-owned enterprises do not pay interest on the funds which are provided by the state to cover the requirements for fixed capital and for their minimum working capital.

The bulk of the funds used to finance the large investment programs as well as other activities of a nonconsumption nature are funneled through the budget of the state which, in turn, works through the banking system. In Eastern Europe the largest source of budgetary revenue is the turnover (sales) tax.

In the Soviet Union and the captive countries the banking and money system is also used as a means of redistributing the national income to the end that is most favorable for strengthening the economy of each country as a whole.

From the standpoint of the individual enterprise the banking system functions as follows:

Each enterprise keeps three accounts with the state bank—a loan account, a current account, and a manager's account. These three accounts correspond roughly to principles of economic management characterized as control by the ruble (or crown or zloty), strict business accounting and socialist emulation.

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[61] Grossman, Gregory, Union of Soviet Socialist Republics, in Beckhart, Benjamin, editor, Banking Systems, New York, Columbia University Press, 1954, p. 738.

Control by the ruble (to describe the best established system in the Communist world) works as follows: Enterprises are forbidden to extend credits to other firms, making all enterprises dependent upon the banking system for financial assistance. This activity has been graphically described by one author:

> Credits in the U. S. S. R. begin as debit entries on the buyer's loan account. For example, a factory producing engine parts is granted a credit to buy steel; this credit will be automatically liquidated as soon as the car plant that purchases the completed engine parts asks for a credit to settle the bill. In time, a third credit will be opened for the wholesale organization that takes over the finished cars, and this, in turn, will enable the car plant to redeem its own obligations.[82]

Purchases and supplies must be based on individual contracts and the state bank may finance only stipulated percentages of any transaction. Contracts undertaken must tally with the programs of national output and with the overall financial balance of the state plan (which contains detailed regulations about costs, prices, wages, and profits). It must also be consistent with the cash and credit plans. The sum total of all technological, production, and financial plans makes up the state plan which is promulgated as a law. The plan is a substitute for the market.

Three authorities see the program through—the state planning commission, the state bank, and the various ministries. The ministries take care of the materials needs of enterprises under their control, the state plan (Gosplan in the case of the Soviet Union) sets up the targets and supervises their fruition and the state bank checks on the profitability of each transaction.

It is at this point that business accounting enters the picture. The state bank is in a position to take effective management of any enterprise by strict control over its current account. Productive operations showing a loss will not be granted further credits unless such losses can be justified. Furthermore, withdrawals for wage payments may be restricted to the amount stipulated in the plan. Firms operating successfully will ordinarily receive credit for expansion without question. Supervision is carried on throughout the duration of each credit to assure repayment. The same procedure is carried on by the long-term loans of investment banks.

Socialist emulation is an attempt to provide incentives for above-plan profits. Such division of profits serves a threefold purpose: They stimulate economic efficiency in enterprises and they control the fulfillment of productive and financial plans by enterprises. The annual financial plan of each enterprise dictates the deductions from profits. These payments are payable from the actual profits of the enterprise whether or not the planned requirements are fulfilled. Consequently, overfulfillment of the planned profit would lower the share of profit payable to the budget from the total profit of the enterprise. Underfulfillment would have the opposite effect. As all profits left in an enterprise after payments to the budget are used for capital investment, for working capital and for allocation to the director's fund, overfulfillment of the plan is desirable in the interests of management. Managers are frequently paid a premium for performance equal to or better than planned. The director's fund is composed of certain per-

[82] Bock, Ernest, Banking in Soviet Russia, the Banker, vol. XCVIII, June 1952, p. 329.

centages of planned and unplanned profits which are expended as follows: 50 percent must be spent for expanding production and for constructing and repairing housing for the plant's workers in amounts above the planned capital investment. The remainder is spent on activities of general benefit to the workers. Following are the percentages of planned and unplanned profits devoted to the director's fund: [63]

Industry	Percent devoted to director's fund	
	Planned profits	Unplanned profits
Coal, metal mining, petroleum, metallurgical production and labor-intensive industries	5	45
Machinery, textiles, etc	2	30
Consumer goods	1	15

NOTE.—These percentages became effective in 1950.

CURRENCY

When the Communists seized power in the Soviet Union in 1917 many of their leaders confidently predicted that the country would do away with money. Toward the end of 1920 a special commission was formed to draft a measure for the abolition of money and to substitute for it a labor unit of accounting. Lenin and other leaders, however, warned that money was important and that it seemed doubtful if the economy could function without it.

With the beginning of the new economic policy in 1921, Soviet authorities realized the necessity of establishing a stable currency if economic development should become successful. Currency has been an integral part of the economy since that time.

The Soviet economy is a money economy. In every aspect of economic life in Eastern Europe money is used as a yardstick of measurement. Although peasant labor is paid partially in kind, all factors of production as well as finished products are evaluated in monetary terms. Every transaction is based upon monetary calculations. Budget receipts and expenditures are balanced as in the free world. Wages are paid in currency and consumer purchases are made with currency. The same is true for the captive countries. These economies are money-using the same as the countries of Western Europe and the United States. The fundamental characteristics of money—medium of exchange, unit of account, and store of value—are present as in the Western World.

Soviet—and presumably captive—people have been restricted in the use to which their money can be put. Planning sets the general limits of consumption, the consumer having some choice in the articles which are available. Optional choices have also been limited by high taxation, compulsory saving, lack of goods, and, until recently, rationing. These limitations are not so true of the captive countries which have, in most cases, only recently shifted to the Soviet system.

[63] Schwartz, Harry, Russia's Soviet Economy, New York, Prentice-Hall, 1954, p. 211.

There are two important uses of money in the free world which are illegal in the Soviet Union.

(1) Money may not be used to finance a private undertaking requiring the employment of others for private profit. (2) It also may not be legally used by private individuals to buy commodities in order to resell them at a higher price.[64]

Not only in the Soviet Union, but also in the other countries of Europe, the history since World War II has been largely one of currency difficulties. Inflation was rampant during the war. The Eastern European countries were mostly in a state of fairly advanced inflation by the end of the war. Currency in circulation in Eastern Europe had increased 10 to 15 times while that in Western Europe had risen on the average only 2 to 6 times.

This is shown in the following table:

European countries—Notes in circulation, June 1939 and June 1945

[In millions of national currency units]

Countries	End of June 1939	End of June 1945	June 1945 (index, June 1939=100)
Western Europe:			
Belgium	22,212	58,483	263
Denmark	446	1,241	278
Eire [1]	16	37	227
France	122,611	[2] 444,476	[2] 363
Greece	8,002	[3] 26,000	[3] 325
Holland	1,045	4,960	475
Iceland	12	167	1,344
Italy	[4] 17,967	[5] 350,000	1,948
Norway	475	2,611	550
Portugal	2,086	7,573	361
Sweden	1,059	2,445	231
Switzerland	1,729	3,522	204
Turkey	211	960	459
United Kingdom	499	1,285	258
Eastern Europe:			
Bulgaria	2,891	[6] 40,700	[6] 1,408
Czechoslovakia [7]	[8] 10,740	[9] 62,200	[10] 580
Finland [11]	2,200	16,971	771
Hungary	1,000	15,000	1,500
Poland	1,848	[12] 26,319	[12] 1,424
Rumania	39,000	649,000	4,780
Yugoslavia [11]	7,177	183,906	2,562

[1] Central Bank of Ireland plus Consolidated Banks.
[2] Figures for Aug. 2, 1945 (1st balance sheet after exchange of notes).
[3] Private estimates for May 1945 (after exchange of currency).
[4] Figures for March 1939.
[5] Including about lire 65 billion of Allied military currency.
[6] Figures for September 1944.
[7] Estimate of total note circulation in Bohemia, Moravia, Silesia, and Slovakia.
[8] Estimate for end of February 1939.
[9] Estimate.
[10] Compared with end of February 1939.
[11] Not a member of the Communist bloc.
[12] Dec. 31, 1945.

Source: Bank for International Settlements. 15th Annual Report, Apr. 1, 1944-Mar. 31, 1945, Basle Autumn 1945, p. 67; 16th Annual Report, Apr. 1, 1945-Mar. 31, 1946, Basle, July 1946, p. 38; 18th Annual Report Apr. 1, 1947-Mar. 31, 1948, Basle, June 1948, p. 130.

In considering the expansion of notes in circulation in Eastern as compared with Western Europe one must remember that checks were used much more in Western Europe. The countries which showed the largest increases in note circulation were those which relied most strongly on currency rather than checks, i. e., Eastern Europe, France and, possibly, Italy. Much of the greatest expansion in note circu-

[64] Schwartz, Harry, Russia's Soviet Economy, New York, Prentice-Hall, 1954, 2d edition, p. 469.

lation was in countries which were occupied by or collaborated with the Germans; in Eastern Europe: Bulgaria, Czechoslovakia, Finland, Hungary, Poland, Rumania, and Yugoslavia; in Western Europe: Italy and France.

Currency reforms seemed to be the most feasible means of solving these problems. Although many currency reforms have taken place in both Eastern and Western Europe since 1945, the main discussion which follows will be on the actions taken by the Communist-bloc nations. Eastern European currency reforms seem to have been undertaken (1) to further the social programs of the governments and, (2) to redistribute the liquid assets of the country concerned (including the absorption of excess purchasing power).

Generally speaking, Eastern European currency reforms attempted to suppress capitalist groups, to achieve farm collectivization and to carry out government programs at the expense of private enterprisers and independent farmers.

Monetary reform has been used by the Soviet Union in the control of repressed inflation. Despite repeated Soviet statements to the contrary, the Soviet Union has experienced inflation (at least until 1948). Inflation was prevalent in the economy from 1929 to 1948 primarily because of the large expenditures for capital-goods production, the expansion of the labor force, and the continuing scarcity of consumer goods.

Because Soviet planning demanded the diversion of a large share of national output away from the consumer, direct controls over many materials became one of the means of limiting the production of consumer goods. However, there was still a free market in some sectors of the economy and there were some loopholes in the physical allocations so that financial planning remained important. By means of direct controls the planners determine within limits the relative share of the national output destined for consumer consumption and for government use. In 1950 over 1,500 commodities were directly allocated by the Government. Quota commodities are supplied by the ministry producing them to any individual user, providing that the quota allocated to the user's industry or area in the procurement plan has not been all used up. The third group may be bought freely wherever available.

These direct controls are supplemented by broad monetary controls. States organizations and industrial enterprises are required to keep the bulk of their funds in the form of bank deposits. The amounts which may be spent by individual firms for specific purposes—wages, capital investment, etc.—are limited by the quarterly or yearly plan of the enterprise.

Rationing of consumers goods was resorted to from 1928 to 1935 and from 1941 to 1948.

These conditions led directly to the Soviet monetary reform of December 1947. It was, in essence, the most drastic attack on inflationary factors undertaken in the Soviet Union since the inauguration of the 5-year plans. In the words of the Bank for International Settlements:

Thus the decree imposed a capital levy on liquid assets, 90 percent of the note issue and 66⅔ percent of government loans being canceled, with certain exceptions for small savings and a few privileged nonprivate holders.[65]

There were two possible reasons for favoring deposits over banknotes:

The Soviets may have wanted to encourage savings deposits which are the principal form of saving in the U. S. S. R., savings deposits are held primarily by the higher income urban population—the managerial class, government officials, etc.—and there is a tendency to favor this group in the population.[66]

Wages and salaries were to stay at the old level. Taxes were unchanged. Rationing was abolished on the theory that the current income of the Soviet people would not be more than sufficient to purchase the current production of the economy. Food prices decreased an average of 5 percent on the items that were previously rationed. Clothing and luxury goods increased above the previous rationed prices, but were far cheaper than they had been in the commercial stores which had sold nonrationed goods at premium prices. Estimates placed the decline on commercial stores prices at about 70 percent.[67]

Peasant farmers and speculators seem to have been the real sufferers from the conversion. Inflationary pressure was practically wiped out by the simple expedient of removing 90 percent of the potential purchasing power from the hands of the people. This conversion has served as the basis for five Communist-bloc currency conversions since December 1947.

Once the governments of the captive countries became part of the Soviet sphere, currency conversions undertaken seem to have been to model their financial systems after that of the Soviet Union. Although Soviet economists have claimed differences in Soviet and free world uses of money, one authority has written:

However, when carefully analyzed, it is difficult to see just what the claimed differences are: The monetary units of other countries are also units of account, used to measure costs of production, prices, wages, etc., and are measures of control over economic operations. They are also means of circulation. Obviously, money used in capitalistic countries is a means of payment as well as a means of deferred payments, also. However, the characteristic of Soviet money as a means of "Socialist accumulation" is more limited than the corresponding characteristic of capitalist money as the means of "accumulation of saving," simply because of the general limitations as regards the use of money for "personal enrichment."[68]

BUDGETS

Budgetary information from the captive nations is scanty and inconclusive. Since the Communists took over, each nation has revamped its economy into an economic system like that of the Soviet Union so that, presumably, a discussion of the Soviet budget would cover (in general outline) the budget systems of the captive nations.

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[65] Bank for International Settlements, 18th Annual Report, April 1, 1947–March 31, 1948. Basle, June 1948, p. 36.

[66] Holzman, Franklyn D., Soviet Taxation: Financial Problems of a Planned Economy, p. 242, footnote 68, paged separately. (Typescript.) (To be published.)

[67] Baran, Paul A., Currency Reform in the U. S. S. R., Harvard Business Review, vol. 26, March 1948, p. 200; Moscow's Currency Deal: Who Gains, Who Loses, World Report, vol. 3, Dec. 23, 1947, p. 13. Dr. Edward Ames estimates citing P. M. Pavlov, O Planovykh Rychagakh Sotsialisticheskogo Gosudarstva, Moscow, 1950, that unified prices of foods and industrial goods were reduced, respectively, to 30 and 40 percent of their former unrationed level. Soviet Bloc Currency Conversions, American Economic Review, vol. 44, June 1954, p. 346, footnote.

[68] Condoide, Mikhail V., The Soviet Financial System, Columbus, Ohio State University, 1951, p. 55. This quotation refers to the Soviet Union only, but since the financial systems of the satellites are based so closely on hers, it is applicable to all members of the Communist bloc.

The budgets of the Soviet Union and its captive nations are much more comprehensive than those of Western Europe and the United States. In 1953, the Soviet budget was 35 percent of gross national product while the corresponding figure for the United States was 20 percent. They are the main source of funds for new capital investment and for the increase and replenishment of working capital. The greater part of investments and other expenditures, including subsidies is included in the budget. All of the socialized medical program is financed through the budget. Educational and cultural institutions are financed through the budget, although some of their expenses are paid for by tuition fees, ticket sales, etc. These are reflected in budgetary receipts.

The state budget of the Soviet Union, for example, comprises 77,000 different budgets.[69] It is a consolidation of (1) the all-union state budget; (2) the state budgets of allied and autonomous republics; (3) the local budgets, i. e., provinces, regions, and districts. Since the captive nations have changed their economic systems to that of the Soviet Union, they apparently have revised their budgetary system in the same manner. It must be kept in mind that approval by the Supreme Soviet is purely formal. No essential change is made in the budget in the hearings held by the Supreme Soviet.

The budget of the Soviet Union (and presumably those of the captive nations) is a part of the overall economic and financial plan of the Government. The national budget collects and redistributes all the financial resources of the country among the peoples for their use, and provides funds for new investment in the national economy, national defense, cultural services, etc. In the Soviet Union (and the captive countries) the Government determines through the budget system what part of the resources shall be allocated to national production and what part to national consumption. "Thus, the national budget of the U. S. S. R. includes the bulk of the national income of the country."[70]

Since the death of Stalin there has been a perceptible change in the Soviet budget. The fact that strikes one most forcibly is the large increase in the unspecified revenue and expenditure items from the 1952 level. Such items increased from 1952 to 1954 as follows: Revenues: 1952, 82.2 billion rubles; 1953, 127.2 billion rubles; 1954, 141.9 billion rubles; expenditures: 1952, 28.8 billion rubles; 1953, 72.4 billion rubles; 1954, 80.4 billion rubles.[71] Nove's article discusses the technical aspects of these changes in detail. He concludes that the changes were made for propaganda purposes.

Annual budgets of the Soviet Union have usually been balanced with an excess of revenue over expenditure. Since Soviet budgetary practice lumps the revenue from Government bonds sold to the public and to financial institutions along with taxpayments and other nonreturnable payments to the Government, the Soviet budget has often been unbalanced (in American terms).

The revenue of the state budget comes from two main sources: (1) The socialized sector and (2) that coming directly from the popula-

[69] Birman, A., The Soviet Financial System, Information Bulletin, U. S. S. R. Embassy, Washington, D. C., February 14, 1946, p. 143.
[70] Condoide, Soviet Financial System, p. 79.
[71] Nove, A., Soviet Budgets After Stalin, Review of Economics and Statistics, vol. XXXVI, November 1954, p. 416.

tion. In group 1 the main sources of revenue are (*a*) the turnover tax and (*b*) deductions from profits; in group 2, (*a*) subscriptions to state loans, and (*b*) taxes and levies on the population.

Soviet bloc countries place their main reliance for income upon the turnover (sales) tax. It is generally collected at the stage of production or at the stage of wholesale trade. In most cases it is a percentage of the planned sales price of an article. Dependence of Soviet bloc countries on the turnover tax is indicated by the following tabulation:

Turnover tax percentage in Communist bloc budgets, 1953 [1]

Country:	*Percentage of budgetary revenue*
Albania	[2] 90.0
Bulgaria	51.2
Czechoslovakia	[2] 91.7
Hungary	[2] 52.5
Poland	[3] 86.0
Rumania	61.0
Soviet Union	[4] 44.2

[1] The Financial Fix, News From Behind the Iron Curtain, vol. 2, No. 6, June 1953, pp. 20–27.
[2] Includes profits tax.
[3] 4.1 percent of total revenue not accounted for in published material.
[4] The Soviet figure seems low. It probably would total about 50 percent if various doubtful receipts were deducted from the budget. The amounts of tax lost through price changes have been included in total revenue as "sums devoted to the reduction of retail prices." This is revenue which never actually existed.

In theory the profits of factories (sales minus the total costs and the turnover tax) belong to the state, but actually only a portion is usually handed over; the minimum tax is 10 percent of the planned profit. Actually even those profits which are retained belong to the state. If an industry has no plans for expansion and does not need working capital, the bulk of its profits may go into the budget. Should a firm require more capital than its profits provide it may receive a budgetary grant. Soviet thinking believes that every enterprise must make a profit. A. M. Aleksandrov, Soviet economist, has mirrored such thinking with the following statement:

> * * * in order to become interested in the results of its economic activity every Soviet enterprise must have a profit. This profit is used for expansion of production and for improving the well-being of its workers.[72]

Communist-bloc countries utilize the profits tax as the next single source of revenue in importance to the turnover tax.

Government bonds are important as a source of income in the Soviet bloc. Purchase of bonds by individuals is practically compulsory. In the Soviet Union, at least, the Government virtually admitted as much in 1953. According to Harry Schwartz:

> The 1953 Government bond issue, carrying a reduced 3 percent interest charge as the basis for lottery prizes, was announced together with the statement that workers would not be allowed to subscribe more than 2 weeks' wages. Thereafter, Soviet propagandists counted among the monetary savings the new regime had brought the Soviet people the reduction in bond sales in 1953 as compared with 1952![73]

State loans have become important as a source of revenue in the captive countries.

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[72] Quoted in Condoide, Mikhail V., The Soviet Financial System, Columbus, Ohio State University, 1951, p. 100.
[73] Schwartz, Harry, Russia's Soviet Economy, New York, Prentice-Hall, 1954, second edition, p. 497.

Other sources of revenue are social insurance taxes and various types of income taxes.

Expenditures on financing the national economy and those on social and cultural measures are far more important in the budgets of Eastern European countries than they are in free-world budgets. A large portion of the expenditures on the national economy have been devoted to heavy industry. This is true even of the Soviet Union. The other expenditures are those characteristic of other budgets; i. e., defense and administration. Until 1953 the bulk of capital investment seems to have gone to heavy industry as against the consumer-goods industries. In 1934–38 about 83 percent of such investment went to heavy industry and 17 percent to light industry.[74]

I. Soviet Statistics as an Instrument of Propaganda

Coordinate in importance with a factual assessment of comparative economic trends in Europe is an understanding of how these trends are being portrayed by Soviet propaganda. Such an understanding fortunately can be gained through the analysis of an authoritative Soviet study, published in 1953 in an edition of 20,000 copies.[75] This volume, prepared by the Institute of Economics of the Academy of Sciences of the Soviet Union, is officially designed for use by "scientific workers concerned with the study of the economics of capitalist countries, lecturers, professors, and instructors and students in higher economic institutions (pp. 7–8)." It comprises nearly 200 statistical tables with an extensive text and is, in general, the current source book for Soviet economic propaganda.

In this volume, the Soviets have handled the statistical data very shrewdly, insofar as maximum propaganda effect is concerned. Essentially, they have employed six techniques:

1. By presenting index and physical output series in the field of industrial production (pp. 78–97) showing at least moderate, though uneven, growth in western countries the Soviets have given their work considerable verisimilitude.

2. In addition, they have attacked a number of western problems and weaknesses which cannot be denied, e. g., the concentration of control in various American and French industries (pp. 74–75), though not, curiously enough, the cartels typical of Western Europe. The Soviets have also stressed the growing share of defense expenditures in western national products (pp. 149–150), and the relationship of these to chronic deficit financing, rising national debts, and inflation (pp. 151–159, 166–167, 253–254) despite heavy, increasing tax burdens (p. 151). Finally, they have juxtaposed the lag in the growth of world trade since 1929 (p. 201), the decline in East-West trade (p. 195), and the substantial dependence of many western countries upon imported raw materials and upon foreign outlets for large parts of their production (pp. 210–224).

3. The Soviets have carefully avoided many areas of western economic and social progress. Notable omissions include data on the

[74] Ibid., p. 220.

[75] Ekonomika Kapitalisticheskikh Stran posle Vtoroy Mirovoy Voyny (The Economies of Capitalist Countries After the Second World War), Izd. Akademika Nauk, Moscow, 1953, 292 p.

per capita availability of consumers' goods and housing; the growth of welfare measures, including social insurance, and expanded health and education facilities; comparative working hours, East and West; the distribution of incomes by size classes and between industries; Western taxation systems, especially progressive-income taxation; systems for the regulation of business; and postwar organizations for international economic cooperation, e. g., "Schumania." By ignoring these areas of positive achievement, the Soviets intensify their picture of Western weakness and decay.

4. Not content with probing for weakness and avoiding areas of progress, the Soviets have also practiced statistical deceptions of various types and degrees. In many cases, data are presented in carefully misleading forms and contexts. Thus, the growth of corporation profits in the United States, England, and France is given in current prices, and before taxes (p. 257). Again, price trends for consumer goods in the Soviet Union and the West are shown for the period 1947–52 alone (p. 25). Since the former year was the peak of the Soviet inflationary crest, prior to a severely deflationary currency conversion, the comparison is strikingly favorable to the East.

Another method of deception is that of calculated omissions. For example, wheat-yield data are shown only for such countries as Argentina, Portugal, and Syria, with the far more productive areas of Western Europe and North America excluded (p. 125). Again, in two tables designed to show the deterioration of the American diet in comparison with prewar years, the decrease in indexes of per capita butter and sugar consumption and the increase in the index of per capita margarine consumption are noted, but data on meat and potato consumption (to say nothing of poultry, dairy products, fruit, vegetables, and beverages) turn out to be "unavailable." [76]

On several occasions, the Soviets are not loath to use meaningless statistics. Thus, undefined wages in the United States in 1950 constituted 72 percent of an unstated "subsistence minimum" (p. 255). In another place, the ratio of the wages of production operatives alone to the total value added in manufacturing is used as a "coefficient of exploitation" (p. 249).

Another technique is the use of the sliding base. This has been applied to the agricultural statistics, which refer—without warning—to a "capitalist world" shrinking over the years covered (pp. 118–121). In this way, enormous declines in agricultural output and acreage have been skillfully suggested.

Finally, outright falsifications may also be found. The most flagrant are in unemployment statistics: The United States, for example, is credited with 13 million unemployed in 1952 (p. 251).

5. The fifth major tactic has been the interpretation of neutral or favorable data in blackly unfavorable terms. For instance, the declines in the western rates of natural increase since 1800 are blandly ascribed to—

> * * * the consequences of the increased exploitation, disorganization, and pauperization of labor by capital, of imperialist wars. This deceleration gives witness to the growing decay of capitalism in the epoch of imperialism, and to the fact that capitalist conditions of production are becoming a brake upon the development of the productive resources of society.

[76] All these data are shown together on the same page in the original source (Bureau of the Census: Statistical Abstract of the United States, 1953, p. 92.)

Illuminating also is the Soviet attack upon United States foreign aid:

> First, the multibillion Government loans and subsidies squeezed out of American taxpayers permit the monopolies of the U. S. A. to stimulate artificially the export of goods and munitions, maintaining domestic prices at a high level. Second, Government loans and subsidies help American monopolies to win new markets for their goods, to execute the most shameless dumping, to seize and secure for themselves raw-materials sources and spheres for appying capital, to destroy and to subordinate to themselves the economies of debtor countries. Third, the Government loans and subsidies carry a clearly expressed reactionary, military-police, and aggressive character and serve as a weapon for the political enserfdom, by American imperialism, of capitalistic countries and their colonies * * * creating military bases and preparations for new military adventures against the U. S. S. R. and the national democracies (pp. 176–177).

6. Data on the Soviet bloc are presented only at a few critical points. The Soviet claims of growth in industrial output (p. 18), in agriculture (a very selective comparison, pp. 22–23), and in national income (pp. 26–27) are advanced. Also stressed are the achievement of budgetary surpluses and declining official prices for consumer goods in recent postwar years (pp. 25–28). Several qualitative boasts are made:

> While manual and unskilled labor is widely used in capitalist countries, with new technology being applied almost exclusively for military purposes, in the Soviet Union, which is engaged in peaceful, creative work, there is being accomplished the mechanization of heavy and laborious work in the national economy, there is a continuous renewing of production technology (p. 22).

In regard to fuller and more explicit comparisons the Soviets maintain a discreet silence.

As a whole, the statistics in this Soviet study are designed to support an intricate but flexible web of doctrine which denigrates the West and beatifies the Soviet bloc. The principal elements of this doctrine include the following:

> 1. "In the postwar period, in the conditions of the further deepening of the general crisis of world capitalistic systems, two poles are being even more sharply distinguished: on one side, the Soviet Union, heading a unified and powerful Socialist camp, a center of gravity for all progressive forces, fighting against the incitement of a new world war and for the strengthening of peace in the whole world, for the right of the people to organize their own lives; on the other side, the monopolies of the United States of America, heading the imperialistic camp, a center of gravity for all aggressive and reactionary powers in the whole world, seeking to unloose a new world war" (p. 15).
>
> 2. "Increased irregularities in the industrial growth of individual countries and branches of industry, chronic underuse of capacity, constant multimillion armies of unemployed, an orgy of militarism, increased disproportion between the branches of military and civil production—all these factors evidencing the decay of capitalism * * * have become increasingly acute in the second stage of the general crisis of world capitalist systems" (p. 63).
>
> 3. "Agricultural production in capitalist countries after the Second World War is in a state of deep decline * * *" (p. 109).
>
> 4. "In the postwar period * * * the superiority of the financial systems of the countries of the Socialist camp over the financial systems of parasitic, rotting, and dying capitalism is especially clear" (p. 139).
>
> 5. "The capacity of the new world democratic market ceaselessly expands from year to year; it knows no difficulties of supply * * *. On the world capitalist market, unconnected with the U. S. S. R. and other democratic nations, economic relations have fallen into a condition of deep disorganization and decline * * *. The militarization of economics has deepened the disproportion between the productive capabilities and the contracting effective demand and led to a growing contraction of the capacity of the entire capitalist market" (pp. 193–194).

6. "After the Second World War, under the influence of economic militarization and sharply increased exploitation, the impoverishment of the proletariat of the capitalist nations has assumed unimaginable proportions and is developing at extremely rapid tempos" (p. 273).

In sum, the Soviet Union is keenly aware of the vital importance of economic development as a goal throughout the world. For this reason, it has organized extensive and sophisticated propaganda to impart to both its own people and the outside world the ideas that the Western World, trapped in social contradictions and choked by malevolence, is doomed and that the sole hope of progress lies with the U. S. S. R. While this propaganda has some aspects which appear ludicrous to the informed westerner, its potential effectiveness should not be underestimated. The themes useful to the Soviet Union are numerous and applicable as needed—e. g., to arouse hostilities within the West, or to justify accelerated Soviet armament. But a major hazard for the U. S. S. R. does rest in this propaganda, and that is self-deception by Soviet policymakers, who may be tempted to fatal action by their own picture of western weakness.

J. The National Accounts [77]

1. THE UNITED KINGDOM [78]

The pre-World War II period

In the interwar period, 1925–38, the United Kingdom's national income in constant values grew at the rate of 2.6 percent per year, compounded annually. A large part of this growth represented increases in labor input, since productivity, which had shot up during World War I, increased between 1925 and 1938 at the rate of only 1.4 percent per year (appendix tables I and II).

Prior to World War II, the bulk of British income came from trade, finance, transportation, and other services. These also were the sectors characterized by the highest productivities, more than twice those of the least-productive sectors, construction, mining, and agriculture. In manufacturing, which contributed a third of the national income, productivity was on an intermediate level. From the standpoint of use, 77 percent of the entire national product went, on the eve of the war, to private consumption; almost 14 percent to government, including defense; and only 10 percent to gross investment.[79] In general, 93 percent of all private disposable income was consumed and 7 percent saved. Food took 27 percent of all private income; rentals, 15 percent; clothing and household textiles, 11 percent; alcohol and tobacco, 10 percent; consumers' durables, 8 percent; and all else, 21 percent. Although income differences had been considerably reduced since pre-World War I days, the income inequalities in the United Kingdom in 1938 were, even after the payment of taxes, more marked than in the other countries of Western Europe, including Germany.[80]

In 1938, governmental expenditures in Britain as contrasted to current government consumption, embraced over a quarter of the

[77] Details of footnote citations will be found in the appendix, p. 267.
[78] Except as otherwise indicated, this analysis is based upon appendix tables I–IX.
[79] After deductions for net imports.
[80] Clark (1951, pp. 532–539). Expenditure data are from Financial Secretary to the Treasury (April 1946) and differ substantially from those submitted in table VII.

entire national product. However, almost 39 percent of these expenditures were social security, interest on the public debt, and other transfer payments, significant primarily for the stabilization and equalization of incomes. An additional 11 percent was invested; it provided 29 percent of the total national resources devoted to investment. Of the remaining 50 percent of government expenditures, almost half were taken by defense. The government revenues in 1938 were insufficient to cover expenditures, the deficit amounting to 4.3 percent of the gross national product and introducing definite inflationary pressures. But the taxation policy itself was moderately regressive and deflationary, with indirect taxes providing 47 percent of the revenues, against 44 percent for direct taxes and 9 percent for all other sources.

Trends: 1938–53

During the period 1938–53, the principal trends in national income and expenditure have been the following:

(1) The growth of the national product in constant prices, somewhat slower (1.9 percent per year) during the war decade 1938–48, has accelerated to 3 percent per year since then. By the end of 1953, the long-term trend line of a 2.6 percent per year average growth had been regained for the entire period since 1938. Since the working population in the United Kingdom rose 15 percent between 1938 and 1953, slightly more than half the growth may be ascribed to rises in national productivity which have taken place almost entirely since 1948 and are currently running about 3 percent per year.[81]

(2) Structurally, the most important postwar changes in the British economy have been increases in the importance of construction and of agriculture, which now contribute 12 percent of the gross domestic product, compared with 6.5 percent, in 1930. The share of services, including transportation, has dropped from 57 to 48 percent over the same period. The share of manufacturing has risen slightly to almost 36 percent of the product.

(3) Transportation and communications have remained highly productive sectors of the British economy; but other services have slipped from high to relatively low, while agriculture and construction have risen from low to high. Manufacturing has retained its median position. In general, however, the differences in relative productivity between economic sectors have lessened since 1930.

(4) From the standpoint of the uses of the national product, the changes since 1938 have been significant. Private consumption, in absolute terms, was possibly 11 percent higher in 1953 than in 1938, or 5 percent higher on a per capita basis. However, as a share of national product it has fallen to two-thirds of the total, while governmental consumption has risen to 19 percent, and investment, including net exports, to 16 percent.

(5) Private disposable income, which still constitutes 71 percent of the gross national product, is being expended today on a pattern substantially like that of 1938. The share of savings (8 percent) has even reached a slightly higher level. The shares of food, consumers' durables, and services are about the same as in 1938. On the other hand,

[81] Clark (1951, p. 408) and Central Office of Information (1953, p. 215) give data on the working population of the United Kingdom, 1931, 1948, and 1953.

clothing has declined from 11 to 9 percent of the total; and rentals, from 15 to 11 percent. In contrast, alcohol and tobacco together have risen from 10 to 17 percent, and have become items more important to the consumer than clothing or housing.[82] These changes reflect the impact of greatly increased indirect taxes (on alcohol and tobacco) and of controls and subsidies (on rentals) operating upon extremely inelastic demand.

(6) The distribution of private incomes after taxes continued to equalize through the course of World War II; since 1946, however, this process has gone no further. In consequence, the distribution of income by relative size in 1953 corresponds closely to that in the United States today, and is marked by greater differences than, say, in the Scandinavian countries.[83]

(7) In 1953, Government expenditures in constant prices (including loans and transfers to private enterprises) were possibly 70 percent higher than in 1938, and embraced 40 percent of the entire gross national product of the United Kingdom. The pattern of regular expenditures was, however, virtually identical. In addition, the British Government, after some years of revenue surplus, was again running a deficit equaling 1.8 percent of the gross national product on the regular expenditures alone, and one of 6.5 of the gross national product if loans and transfers to private enterprises be included. Finally, the relative share of direct taxation in 1953 revenues (49 percent) was considerably higher than in 1938, but at or below the levels of earlier postwar years. In all, while the economic importance of the Government has increased noticeably since 1938, its general role within the economy has remained surprisingly stable, with the growth of indirect support to private investment being the major new development.

(8) Gross investment, including net exports, has increased by some 30 percent since 1938 (in constant values), and now constitutes about 15 percent of the gross national product. In 1953, domestic capital formation through construction and the installation of equipment alone took 14 percent of the national product. Furthermore, between 40 and 50 percent of this capital formation has, since 1948, been devoted to the basic production sectors: manufacturing, mining, utilities, and agriculture. Housing and miscellaneous public services have, in contrast, been averaging only 25 to 30 percent of the total.[84] In consequence, British investment has been extremely effective in promoting directly the growth of the national product, albeit at the cost of an increasing backlog in amenities.

Summary.—In broad outline, the major features of British postwar development have been steady growth although at a moderate rate; extraordinary structural stability in such basic features as demand and the governmental role; and moderate rates of investment directed very heavily toward the basic production sectors.

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[82] Central Office of Information (1953, p. 94); Financial Secretary to the Treasury (1954, p. 5).

[83] Hagstroem (1950), for the United Kingdom, 1952, and the United States, 1951. Pareto coefficients of income inequality based on Lorenz curves were computed from data in Central Office of Information (1953, p. 73) and Bureau of the Census (1953, p. 286), respectively. The figures calculated are 1.9 for the United Kingdom, 1.85 for the United States, as opposed to 2.45 in Sweden in 1948. The lower the coefficient the greater is the inequality of incomes.

[84] See also U. N. E/ECE/157, February 1953, p. 60.

The outlook for the future

The future prospects of the British economy appear, from the standpoint of potential supply, to be dependent upon continuous increases in the productivity of labor. While the age group 15 to 59 will have grown about 3 percent by the early 1970's, a probable shortening of work hours and the advent of more widespread secondary and higher education, will most likely lead to a decrease in national man-hour input of some 5 to 10 percent.[85] In addition, British dependence on foreign trade makes essential a production that can compete in price and quality on the world markets; to achieve this, a substantial investment rate is mandatory.

The share of investment in the national product has been increasing since World War II; further moderate increases to permit greater investment in amenities appear both necessary and possible. At the same time, changes in the pattern of domestic capital formation are most likely. For example, the share devoted to agriculture has been diminishing since 1950. It is likely to diminish even more rapidly in the future. In contrast, increasing investment in services, especially education, is very probable, and would maximize Britain's potentials in exporting skills as well as goods. For these reasons, a continuation of the present rate of increase in productivity, 3 percent per year, appears quite probable even over a long period. Multiplying the sum of the productivity increases, 1953–71, by the estimate labor input gives a possible rise in national product at constant prices of 55 to 60 percent by 1971.

On the demand side, British conservatism is a favorable element for the short run, so long as further increases in the share of investment and, possibly, government are of primary importance. But over a longer period, increases and changes in per capita consumption would become necessary to maintain demand, since the anticipated growth of population is small.

2. FRANCE [86]

The pre-World War II situation

In France, the period between the two world wars was marked by an initial phase of recovery and growth which culminated in 1928 in a national income at fixed prices some 38 percent above that of 1911.[87] The second phase was one of decline and subsequent stagnation, with the French national income leveling off in 1936–38 at a point only 5 percent above the 1934 trough and 17 percent below the 1928 high.

The causes of this failure to grow still await definitive study. The following factors were unquestionably important:

[85] The average number of hours actually worked weekly in the United Kingdom in 1953 was 46.2, which includes an average of 1.7 hours overtime (Central Office of Information, 1953, p. 225). In 1938, the actual number of hours worked was 46.7 (Clark, 1953, p. 63). It is assumed that, by 1970, work hours will be 10 percent shorter than in 1953, or 41.6 per week. In regard to education, it should be noted that, in 1953, only 8 percent of the British population aged 16–24 was in school, compared to 18 percent in the United States in 1951. Assuming an increase to 15 percent educational participation in the 16–24-age group in 1970 would reduce the labor force by about 400,000 persons or its increment, 1953–70, to about 1 percent. Multiplying a workweek 90 percent as great as in 1953 by a labor force 1 percent greater gives a labor input 90.9 percent as great or, roughly, 90–95 percent as great.

[86] Except as otherwise indicated, this analysis is based upon appendix tables I–IX.

[87] Clark (1951, p. 80).

(1) French agriculture, which had been characterized by the world's highest labor productivities in the 1890's, was able to make little further advance in subsequent years. In addition, low rates of natural increase and continuing urbanization led to a decline of 21 percent in the agricultural labor force between 1901 and 1936.[88] The general result was that, although agriculture remained a large segment of the country's economy, France became a significant net importer of food and other agricultural products. This, combined with a shaky foreign-exchange position after World War I, depressed food consumption and the general standard of living.

(2) French manufacturing was distinguished by both extremely small and rather large producing units. In 1931, out of 1.6 million establishments,[89] 58.6 percent were one-man affairs, an additional 37.4 percent employed 10 persons or fewer, while only 0.41 percent employed 101 to 500, and 0.07 percent employed more than 500. Yet these last 2 categories, comprising less than half a percent of all enterprises, employed 43 percent of the entire labor force in manufacturing, and virtually all in the basic industries. Despite this disequilibrium, the overall productivity of labor in French manufacturing was able to grow at an average rate of 1.7 to 1.8 percent per year between 1895 and 1930, and 3.2 percent per year between 1930 and 1938.[90] Rather, the most adverse effects were the low wages and profits of French small business competing with or subservient to the great establishments. This again dampened effective demand.

(3) The immense losses of capital during World War I never were made up. Further disinvestment, in fact, characterized the 1930's. The losses were heaviest in agriculture and in housing, which adversely affected the productivity of the rural sector, on the one hand, and discouraged urban immigration, on the other.

(4) As a result of both war losses and long-term vital trends, the French population stabilized, while the labor force declined from 19.5 million in 1906 to 17.1 million men and women in 1936.[91] Yet economic activity in the latter year was so low that unemployment had risen to 983,000 as opposed to 253,000 in 1906. Furthermore the average workweek had become substantially shorter. In all, the input of labor into the French economy declined by at least a third between 1906 and 1936.

(5) The French Government, heavily burdened by high interest on the public debt and by rising pension costs, and without a vigorous tax policy, remained chronically in deficit after World War I. Thus in 1936 nearly a third of all expenditures had to be covered by loans. This induced a virtually permanent inflation. Since the 1930's were, in general, a period of severe deflation, with the purchasing power of the United States dollar rising 26 percent between 1929 and 1938 and that of the German mark rising 28 percent between 1925 and 1937, the French terms of trade worsened steadily. This in turn led to a flight of capital, on the one hand, and growing hoarding and speculation, on the other, which held back both consumption and investment.

(6) Finally, the major French answer to the great depression was to maximize the stabilization of private incomes and, in part, to

[88] Ibid, pp. 316–7, 409.
[89] Rist and Pirou (1939, pp. 168–172).
[90] Calculated from Clark (1951, pp. 316–317).
[91] Rist and Pirou (1939, p. 49).

redistribute incomes through substantial increases in family allowances, subsidies and restraints on competition. In consequence, costs of production and the price structure were severely distorted, and entrepreneurial initiative was dampened. At the same time, since the tax structure remained regressive, little was actually realized in broadening the scale of consumer demand.

Concretely, the main features of French national accounts in the years 1936–38 may be sketched in the following terms. Fifty-seven percent of the French national income in the years 1936–38 derived from basic production (agriculture, manufacturing, mining, and construction), with agriculture alone contributing 22 percent. Trade dominated the services, generating 15 percent of the national income, while all other activities together (transportation, finance, government, rentals, etc.) yielded only 28 percent. The relative productivity differences between the various sectors were slight, except that finance and the railroads generating 50 percent more than the average per person employed; Government, including defense, a quarter less than the average. Over three-quarters of the French gross national product was consumed by households. Of the remainder, about 15 percent covered the current military and civil functions of the Government, while gross investment (corrected for net imports) totaled about 9 percent.

Little is known about the consumption pattern. In a small sample of French working-class families in 1936–37, expenditures on food comprised 52 percent of the total; rentals, lighting and heat, 14 percent; clothing, 11 percent; consumer durables, 4 percent; and all other, 19 percent.[92]

Regular Government expenditures in 1938 embraced 26 percent of the gross national product. The largest share of these expenditures, 36 percent, comprised social security, war pensions, interest on the public debt, and other transfers to individuals. Another 11 percent were consumption and production subsidies. Defense took a quarter of the regular Government expenditures, or 6.6 percent of the gross national product. All current civil functions together received 21 percent. Finally, investments comprised only 6 percent of the regular total, and covered only some 15 percent of France's gross capital formation, meager as it was. It must be pointed out, however, that Government loans, transfers, and guaranties underwrote a far greater segment of the country's investment effort than this. Although the data cannot be quantified with confidence, possibly half of all French investment in 1938, and nearly all that in transportation and utilities, fell under this rubric.[93] Thus, in addition to its basic functions, the Government not only took the major role in the stabilization and equalization of incomes, but also a significant though indirect one in investment.

Expenditures exceeded revenues by 15 percent, the deficit amounting to 4 percent of the gross national product. The tax system was regressive, with 48 percent of the Government revenues deriving from indirect taxes, 40 percent from direct taxes (largely social security and corporate profits taxes), and 12 percent from the profits of Government enterprises.

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[92] Ibid, p. 444.
[93] Rist and Pirou (1939, especially pp. 894, 908, 910).

Trends: 1938–53.

Between 1946 and 1951, the French economy, greatly assisted by the United States, recovered rapidly. The French gross national product in fixed prices rose from some 73 percent of the 1928 level in the former year to 107 percent of that level in the latter. By 1951, it was 33 percent above the 1938 level. Since 1951, however, France's growth has leveled off, largely through inability to meet the problems of the Korean war inflation and its aftermaths. Until 1953, inflation raged, with speculation little checked by Government controls. Wholesale prices, which had already risen threefold between 1946 and 1949, rose another 40 percent, to 4.2 times the 1946 level. This, coupled with increasing competition in world markets from the reviving industries of Germany and other countries, worsened France's terms of trade and forced contraction in imports, particularly for consumers' goods. The lessening and change of objective in American aid, which shifted from general support of the economy to concentration on the defense sector, was another adverse factor. Especially important was the inelasticity of French consumers' goods output and distribution, caused in part by structural rigidities and in part by the prior commitment of most investment resources to housing, producers' goods, and overseas expenditure. In sum, private consumption could not grow between 1951 and 1953, since the consumer was able to receive less from abroad, and little more at home.

Finally, 1953 was marked by a new stage, in which French resources shifted increasingly from investment to consumption. The elimination of prior budgetary surpluses and the Government's fear of setting off another acute inflationary spiral through large-scale deficit financing appear to underlie this development.

Let us now turn to the continuities and changes in the structure of the French economy since 1938.

(1) The shares of the national income contributed by various sectors have remained rather stable. In 1948, the share derived from basic production (agriculture, manufacturing, mining, and construction) was 55 percent, almost unchanged from 1938. The major differences were rises in relative importance for Government (largely defense), from 8.4 percent to 11.6 percent, and construction, from 4.7 percent to 6.5 percent. In contrast, the share of agriculture declined, from 21.8 percent to 17.0 percent.

(2) For the economy as a whole, the growth of national product from 1938 to 1953 seems to have reflected largely an increase in labor input, with the labor force rising from about 17.7 to 20.5 million, with unemployment dropping from nearly a million to 200,000, and with the average workweek lengthening about 10 percent. In 1953, national man-hour productivity was only some 5 percent higher than in 1938. This generalization embraces the net result of opposing trends. In agriculture, the labor force had been swollen by wartime flight from the cities. In 1946 it numbered 7.3 million persons, and even in 1950 it was 6.2 million, against not more than 5 million in 1938.[94] But it was plagued by capital shortages and often inexperienced. In consequence, the productivity of French agricultural labor was not more than 85

[94] Muller-Ohlsen (1952, pp. 14–18).

percent of the 1938 level in 1953. Manufacturing, including handicrafts and mining, have shown a contrary trend, with employment dropping, as a result of wartime de-urbanization, from some 5.7 million in 1938 to 4.4 million in 1951.[95] With substantial investment in the postwar period, productivity in this sector has been rising 4 to 5 percent per year. It may be estimated that, in 1953, French man-year productivity in manufacturing and mining was 70 percent higher than in 1938, and possibly 35 percent higher on a man-hour basis. Organizational changes, especially a substantial shift from handicrafts to larger-scale production units; increases in labor hours and higher use of capacity; and technological changes associated with new investment have been the operative factors. These opposing trends have created substantial differences in the productivities of the various economic sectors: in 1953, agriculture probably generated only half as much income per person as did the economy as a whole, while manufacturing and mining may have generated 50 percent more than the average. Thus, conditions favoring a flow of labor to manufacturing and of capital to agriculture have developed.

(3) Radical changes have taken place in the pattern of end-uses of the gross national product. The share of private consumption has dropped from 76 to 67 percent of the total. Government consumption has risen from almost 15 to nearly 18 percent, a change entirely attributable to heavier defense spending. Finally, gross investment (less net imports) soared from 9 percent of the national product in 1938 to 19 percent in 1951,[96] and then fell abruptly to 14.8 percent in 1953.

(4) Private disposable income after direct taxes (including that of corporations) took in 1953 almost the same share as in 1938. Savings, however, now approximated 17 percent of private disposable income, possibly double that on the eve of World War II. As a result, consumption has risen somewhat more slowly, reaching in 1953 a level 15 percent above that of 1938; about 11 percent higher, on a per capita basis. Trends in the consumption pattern are uncertain, in view of the fragmentary character of the prewar data cited earlier. If these are regarded as representative, however, the share of food in consumer expenditures in 1953 (45 percent) was slightly lower than prewar; that of rents (2 percent), much lower, and those of clothing (16 percent), consumers' durables (11 percent), and all other goods and services (25 percent) also greater. The drop in rentals reflects the impact of controls, but the other apparent changes are consonant with a rising standard of living.

(5) In 1953, total Government expenditures in constant prices were nearly twice as high as in 1938, and embraced 41 percent of the gross national product of France, compared to 26 percent in the earlier year. The structure of expenditures also has changed. Direct transfer payments have fallen to 35 percent of the total, with subsidies down to 6 percent. Current civil functions of the Government took 20 percent, a slightly smaller share than prewar, while defense now receives a somewhat greater portion, 25 percent of the total. Finally, the most radical change has been in the share of investment (both directly and through loans to private enterprise) which now gets 17 percent, twice

[95] The 1936–38 figure estimated from Clark (1951, pp. 444, 80); 1951, from Muller-Ohlsen, 1952, p. 50).
[96] OEEC.

as much in relative terms and 4 times as much in absolute terms, as formerly. In 1953, Government financing comprised 45 percent of total gross capital formation. In general, defense and investment have become increasingly central functions of the Government.

In 1953, Government expenditures (including loans and transfers to private enterprises) exceeded revenues by 16 percent, the deficit comprising 5.8 percent of the gross national product, obviously a dangerously inflationary situation, held in check only by the availability of counterpart funds. The taxation system, it must be noted, has become much less regressive. In 1953, 48 percent of the revenues came from direct taxation, as opposed to 40 percent in 1938. The share of indirect taxes, 50 percent, has risen slightly, while Government income from property and other sources has become insignificant.

(6) The scale of French gross investment, with net imports deducted, to measure the domestic effort more equitably, rose 2.2 to 2.5 fold, in constant prices, between 1938 and 1953. As stated earlier, almost 15 percent of the French gross national product was being invested in the latter year. Data on the structure of gross capital formation are available only for the centrally financed sector, and exclude self-financing.[97] In 1948 this central sector comprised 83 percent of the total, but by 1953 it had fallen to 58 percent. Within this sector, considerable changes in emphasis have taken place between 1948 and 1953. The share of transportation and commerce has dropped from 38 to 25 percent; and that of manufacturing, mining, and utilities, from 27 to 18 percent. In contrast, housing has risen from 9 to 25 percent of all centralized investment, although other services have fallen from 14 to 7 percent. Investment in overseas possessions has gone up from 9 to 16 percent. But agriculture, vital as it is to the French economy, received only 6 percent of centralized investment in 1948 and 8 percent in 1953.

Summary.—The French economy has given much evidence of a new vitality since World War II. Investment has been maintained at a substantial level, and notable gains in output and productivity have been made in mining and manufacturing. Practically full employment has been maintained. Two cardinal weaknesses have, however, counterbalanced these gains and may jeopardize future growth. The first of these is the grave state of French agriculture, with regard to both total output and labor productivity, a condition which imposes an unnecessary drain upon French foreign exchange, depresses consumer demand, and freezes much labor (30 percent of all employed persons) that could in large part be used to better advantage. The second weakness is the chronic financial overcommitment of the French Government, which simultaneously attempts to stabilize incomes, maintain a strong military posture, finance investments, and carry on extensive civil functions. Unable to do so despite heavy taxation, it has resorted constantly to deficit financing. This and weak monetary control have in turn set up repeated severe inflation, with widespread ill effects to the French economy.

The outlook for the future

The future prospects of the French economy are conditioned in part by underlying resources, especially manpower. The French labor

[97] See also Muller-Ohlsen (1952, pp. 123–131).

force, barring significant immigration, will grow only by some 3 percent in the period 1953–71. But the very large percentage in agriculture today, almost a third of the total, could with effective investment and appropriate changes in the organization of output and marketing, be reduced by half or more, releasing large quantities of labor to other economic sectors. Furthermore, even in the urban component of the labor force, the absorption of greater numbers of handicrafts workers and operators of tiny shops into more efficient production and marketing units could result in very large increases in productivity in coming years.

The other major, and determining factor is that of French economic policy. If France continues to drift without correcting the inconsistencies and disequilibria of her present-day economy, the future appears grim, with limited advances stultified by periodic setbacks and financial chaos.

For the maintenance of steady economic growth the essential condition appears to be a matching of commitments and economic strength. This can be achieved in 1 of 2 ways. The first involves sharply reducing armaments from the present level of 10 percent or more of the gross national product (the highest proportion in free Europe excluding Yugoslavia) and rigid control of foreign trade.

The second involves systematic, continued capital importation from other nations, which in conjunction with French economic reforms and the modernization of agriculture, might well achieve a growth rate of 4 to 5 percent per year, or a doubling in some 20 years, with profound consequences for the stability of both France and Europe as a whole. The present negotiations of the French Government with Germany to promote this type of economic collaboration, if successful, might implement the second possibility. The achievement of Western European union would also lighten French military commitments, especially as a share of a growing national product. Thus, a real possibility of a French economic renaissance exists today. Whether it will be realized, given the mercurial character of French politics, is still uncertain.

3. GROWTH POTENTIAL OF THE SOVIET UNION TO 1970

The possible rate of growth of the United States and Canadian economies over the next two decades (about 4 percent annually in terms of 1953 United States prices) fully matches the potentials of the Soviet Union, so that no narrowing of the existing gap need take place. In fact, the reserve of labor and capital in the United States and Canada is so substantial that the gap might even be widened appreciably. Whether this will actually occur is a matter of choice rather than of physical capability.

Throughout the period 1948–53 the economy of the Soviet Union expanded about 43 percent, which was at the rate of about 7 percent per annum (in terms of Soviet 1934–37 values). That this rapid growth of the Soviet economy probably cannot be maintained is indicated by the following observations:

(*a*) The Soviet labor force constitutes an extremely high proportion of the total population (50 percent) and, especially, of the population 15 years of age and over (75–80 percent). This high proportion results from 3 circumstances which are likely to disappear; namely, an

unusually large proportion of adult, single, employed women, relatively low school attendance (7–8 percent) in the 15–24 age group, and a substantial amount of child labor, especially in the age group 12–14. The first reflects the shortage of adult males as a consequence of the enormous losses of World War II. In the next two decades, and barring new wars, this probably will disappear. Also, the marriage rate among women ought to rise sharply. Because of the high fertility of married couples, an employment rate of 60 percent of the women 15 years of age and over (as opposed to 70 percent today)[98] is unlikely to be exceeded. The Soviet Union also is trying to improve its educational standards. An increase in school attendance to 20 percent of the 15–24 age group is not unlikely by 1970, for in the United States in 1951 an attendance level of 35 percent had already been reached.

In view of these factors, while the age group 15 years and older is expected to be some 40–45 percent greater in 1970 than in 1953, the labor force is likely to be only 20–25 percent greater. The proportion of males and the general quality of the labor force, however, would be more favorable than at the present time.

(*b*) The present 48-hour workweek exceeds that of prewar years by nearly 20 percent. It does not seem unreasonable to assume a 10-percent decline in the workweek by 1970. All in all, therefore, the estimated labor input in the Soviet economy in the latter year is not over 10 percent higher than in 1953.

(*c*) The present level of agricultural output in the Soviet Union is far from satisfactory. Continued failures of attempts to increase the livestock population afford ample evidence of the large gap between supply and demand. The dietary levels of the Soviet population are exceedingly poor. In 1950, fully 85 percent (by weight) of the diet of the urban population consisted solely of bread, potatoes, and coarse vegetables.

Since it is expected that the population of the country will increase by 40 percent or more by 1970, an increase of at least 60 percent in agricultural output would appear to be essential. To achieve such an increase will make it even more difficult than it now is to transfer labor from agriculture to industry. If the productivity of agricultural labor could be increased by 3 percent annually—which is as high a rate as the Soviet Union ever has achieved—it might make it possible to diminish the present agricultural labor supply by about 6 percent, or some 3.5 million workers. In addition, the cities would gain all the increment in the nation's labor force. Thus, the potential increase in the nonagricultural labor force (military and civilian combined) approximates 55–60 percent; in the labor input, 40–45 percent.

(*d*) At the present time, the Soviet Union has about 330 million square meters of urban housing space which is the equivalent of 3.9 square meters, or less than one-third of a room, per person. Over one-half of all housing, furthermore, dates back to 1932, or earlier. Much of it is far below any tolerable standard with regard to sanitary facilities, water supply, et cetera. By 1970, the urban population of the Soviet Union is likely to have doubled, as a result of natural increase and the inmigration concomitant with a program of continued,

[98] These figures include women in agriculture who are employed only seasonally.

rapid industrialization. The cumulative demand for an increase of some 85 million city dwellers, plus the minimum replacement of over-age dwellings would generate a cumulative demand for at least 500 million square meters of housing, given no increase in present allotments of space. A return to the 1937–40 level of about 4.5 square meters or the 1928 level of 6 square meters would boost housing needs to 600 or 855 million square meters, respectively, for the period 1954–70. Against these requirements the actual Soviet achievement, 1946–53, of 153 million square meters has been quite modest.

The difficulty in providing minimum civic facilities (water supplies, marketing facilities, schools, hospitals, et cetera) is comparably great. The overloading of transportation is equally marked. For these reasons, it seems quite doubtful that the Soviet Union will be capable of devoting, on a substantial basis, fully 50 percent of its new investment to manufacturing power and mining alone. A more likely share, taking into account the competing needs of housing, transportation and agriculture, is not over 35 percent. Finally, it appears unlikely that the share of gross investment in the total national product—about 26 percent in 1953—can be increased significantly, barring a sharp decline in the share of military expenditures (Appendix, table X–6).

The aging of the industrial plant itself and the increasing importance of depreciation must be taken into account.[99] Clearly, the present growth of net investment in manufacturing, and consequently the rate of increase of industrial output, cannot be maintained indefinitely. It seems conservative to estimate that net investment in manufacturing will decline over the next 2 decades from about 12 percent of the gross national product to some 7 percent, and that the growth of industrial output will decline from the 11 percent average of 1950–53 to about 6 percent. On the basis of investment capacity alone, a 2.8-fold increase in manufacturing appears to represent the maximum Soviet potential by 1970.

(*e*) Between 1937 and 1953, the industrial output of the Soviet Union increased by 130 percent. In order to accomplish this result, however, it was necessary to expand the labor force in mining, manufacturing, and utilities by 70 percent and to lengthen the workweek by 17 percent. The resulting increase in man-hour productivity in manufacturing has been a modest 15 to 16 percent, or about 1 percent per year. Over the latter part of this period, however, the results were better than over the earlier years. Between 1950 and 1953, as in 1928–37, industrial man-hour productivity increased by 4.5 to 5.0 percent annually.

What factor of productivity increase to use is therefore a difficult decision. It must be kept in mind, however, that productivity depends, not merely upon better machines or more energy, but also upon more and better education, better nutrition, and higher morale. Yet the evidence reviewed already shows that, even to meet minimum demands in agricultural products and urban housing, the Soviet Union would have to make a substantial shift in its present pattern of investment. To raise living standards significantly would clearly require

[99] The change in depreciation rate is especially significant, as an evergrowing share of Soviet investment is being represented by producers' durables (with an amortizable life of, say, 10 years) as opposed to construction (with a life of 40 years).

the abandonment of forced-draft industrialization. With these qualifications and an assumption of continued rapid industrialization in mind, an estimate of an average annual productivity increase of 4 percent may be advanced.

It must also be noted that, while the industrial labor force grew 70 percent, and the armed forces more than tripled, between 1937 and 1953, the numbers in civilian services increased by some 65 percent. In general, the share of industry in the total nonagricultural labor force has been stable, or even falling off slightly.

Thus, applying the estimated 40- to 45-percent increase in the nonagricultural labor input (par. (*c*) above) to industry, granting a sustained annual increase of 4 percent in the productivity of the industrial labor force and multiplying the product by the estimated increase in labor input, gives a 2.8-fold increase in industrial output by 1970, consistent with the argument from investment capacity.

(*f*) The final consideration is the dual one of armaments and the availability of satellite tribute. In general, these appear to be balancing factors, i. e., high armaments expenditures derive in substantial part from the excess of resources made available from the captive countries. In the long run, it is likely that both factors will diminish as shares of the national product. For purposes of calculation, they have been treated as neutral factors, i. e., the assumption is made that roughly 10 percent of the domestic product of the Soviet Union will continue to be devoted to armaments and that any further outlays would derive from captive-country resources.

(*g*) To sum up, the calculations of the possible Soviet gross national product in 1934–37 prices are as follows:

Factor	Percent of product originated in 1953	Index of growth by 1970	Product
Agriculture	22.8	1.60	36.5
Industry and construction	45.7	2.80	128.0
Services and rentals	31.5	1.60	50.4
Total	100.0		214.9

In other words, the Soviet *capability* of growth under highly favorable conditions approximates a doubling in national product between 1953 and 1970, or an annual rate of about 4.5 to 5 percent, measured in Soviet terms. In contemporary United States prices this rate would be substantially reduced.

4. POLAND [1]

The Pre-World War II situation

Taken as a whole, the interwar period was one of stagnation for the Polish economy. In most branches of agriculture and industry, output at the end of the 1930's was lower, on a per capita and even on an absolute basis, than it had been on the eve of World War I in the territories that were to form Poland.

Four phases can be distinguished in the development of Poland's economy between World Wars I and II: After the conclusion of the peace treaty with Soviet Russia in 1921 and until 1927, Poland was recovering partially and fitfully from the enormous damage of World

[1] Prepared with the collaboration of Mr. Leon Lewins, U. S. Department of State.

War I and the Russo-Polish war. Combat and epidemics had reduced the 1914 population by 12 percent.[2] The various occupying powers had stripped the country of livestock, machinery, and equipment; 1.8 million buildings had been destroyed. Yet Poland not only failed to receive indemnities, but was also forced by the Versailles Treaty to assume part of the burdens imposed upon Germany and the former Austro-Hungarian Empire. Furthermore, the aid provided Poland by France, the United States, and other nations had to be repaid with interest. Above all, the inexperienced and weak Polish Government faced an almost insuperable task in attempting to weld portions of three antecedent nations into an economically cohesive state. The consequences were repeated hyperinflations and temporary stabilizations with foreign loans at 7- or 8-percent interest. The trade balance remained adverse, domestic investment was negligible, production stagnated, and unemployment continued high.[3]

The Polish economy from World War I to World War II

Factor	Unit	1909–13 (a)	1934–38 (b)	Index $\frac{b}{a}\times 100$
Population	Million persons	[1] 30.3	[2] 34.8	115
Agriculture:				
Wheat	Million metric tons	[3] 1.68	[4] 2.03	121
Rye	do	[3] 5.71	[4] 6.00	105
Barley	do	[3] 1.49	[4] 1.38	93
Oats	do	[3] 2.81	[4] 2.49	89
Total grain	do	[3] 11.69	[4] 11.90	102
Potatoes	do	[3] 24.79	[4] 37.25	150
Mining:				
Coal	do	[5] 40.7	[6] 38.1	94
Petroleum	do	[5] 1.1	[6] .5	46
Iron ore	do	[5] .45	[6] .87	194
Primary zinc	Thousand metric tons	[5] 192	[7] 113	59
Primary lead	do	[5] 40	[7] 19	48
Manufacturing:				
Rolled steel products	do	[5] 985	[6] 1,100	112
Cotton textiles	Million spindles	[5] 2.87	[6] 1.82	63
Paper	Thousand metric tons	[5] 60	[6] 205	342
Sugar	do	[5] 557	[6] 491	88

[1] Mauldin and Akers (1954, p. 19), for 1914.
[2] Ibid., for 1939.
[3] Gorecki (1935, p. 77), 1909–13 average.
[4] Buell (1939, p. 192), 1936–37 averages. Note that grain output in 1938 totaled 13.46 million metric tons.
[5] American-Russian Chamber of Commerce and Industry in Poland (1923).
[6] See table XI–2.
[7] Central Statistical Office (1949, p. 2).
[8] Gorecki (1935, p. 92), for 1934.

The period 1927–29 was one of relative prosperity. It was initiated by a windfall to Polish industry as a result of the great British coal strike of 1926. A measurable part was also played by Pilsudski's reforms. Budgetary surpluses were achieved, largely through better control of expenditures. The foreign-trade balance became favorable, industrial output rose, and unemployment was virtually eliminated. Nevertheless, serious weaknesses persisted; the weakness of the domestic capital market led to new borrowing from abroad, again at 7 percent interest. At the same time, rigid linking of the currency to

[2] Mauldin and Akers (1954, p. 19).
[3] Zweig (1944, pp. 31–48).

gold restrained both monetary circulation and credit. Finally, even in 1929, gross investment reached only 7 to 8 percent of the gross national product.[4]

From 1930 to 1936, deep economic depression reigned in Poland. The collapse of world prices for raw material drastically cut the value of Polish exports. Yet the Polish Government would not limit payments on foreign debts, which not only took some 13 to 14 percent of the budget all through the thirties but also drained Poland's limited currency. As monetary circulation declined, hoarding intensified, deepening the deflation. At the same time, cartelization was encouraged, differentials in domestic and export prices were not merely permitted but often subsidized as well. Even with general deflation, cartel and state monopoly prices fell slowly. Thus the Polish people had to buy dear and sell cheap. The farmers suffered severely, for by 1934 the prices of the goods they sold ran only 37 percent of the 1928 level, while the prices of the goods they purchased were 70 percent of the 1928 level.[5] Between 1928 and 1933, industrial employment fell 36 percent,[6] yet public works were actually cut back in order to balance the Government budget.

Finally, in 1936, Poland radically changed its policies. The Government, which had acquired an increasing share of Polish industry as a result of bankruptcies, embarked upon a course of active State capitalism. Foreign-exchange controls were introduced, imports were strictly regulated, and service on foreign debts was suspended. Domestically, the stocks and sales prices of consumers' necessities were put under direct controls. Fiscal reforms included the introduction of progressive income taxes, deductions for investment, and credit expansion through large internal loans and forced savings. Above all, the Government began a 15-year program of investment, particularly focused on central Poland. Over the years 1936–40, 5.45 billion zlotys or about 6 percent of the Polish gross national product were to be expended on this program.[7] The development of the armaments industries, transportation, and power were primary objectives. The largest single plant completed under this program was the State Steel Works at Stalowa Wola.[8]

In 1938, therefore, the Polish economy was in a period of rapid change. The national product had returned to about the 1929 level, though not on a per capita basis. Nearly 40 percent of the national product still originated in agriculture, forestry, and fisheries. Next in importance came large and medium scale industry with 23 percent, and services with 19 percent. Handicrafts, transportation and communications, and construction contributed 9, 5, and 4 percent, respectively. The differences in productivity between these sectors were enormous. The income generated per employed person in industry, which enjoyed the stimulus of the new investments, was 7.6 times as great as in agriculture. In transportation and communications, likewise recently modernized, the ratio to agricultural productivity was 3.1 to 1. Services and handicrafts had about double agricultural pro-

[4] Zweig (1944, pp. 87–88).
[5] Buell (1939, p. 192).
[6] Polish Ministry of Information (1941, p. 111).
[7] Buell (1939, pp. 138–140).
[8] Zweig (1944, pp. 77–82).

ductivity, while in construction, workers were almost as inefficient as the peasant.[9]

It is estimated that, of the gross national product, 77 percent was consumed by households. Almost 11 percent covered current governmental needs, including 4.5 percent for defense, 3.9 percent for civil administration, and 2.3 percent for health and education. The remaining 12 percent was gross investment, public and private.[10]

In household consumption, the largest component (48 percent) was food; rentals, heat, and light were next, taking 22 percent. Almost 15 percent went for clothing, and another 4 percent for household goods. All other goods, including alcohol and tobacco, were covered by the remaining 11 percent.[11] Data on income distribution are unfortunately lacking.

Government expenditures,[12] including investments through borrowing and forced savings, embraced almost 19 percent of the Polish gross national product. Gross investment constituted 29 percent of these expenditures, and transfer payments (largely interest on the public debt) another 14 percent. Current Government consumption, already detailed, embraced the remaining 57 percent. In all, only 61 percent of all Government expenditures were covered by revenues other than forced savings and loans. The biggest source of governmental income was direct taxation, which brought in almost 50 percent of the revenue, including some 14 percent from the new income tax. Next came the traditional group of monopolies: Alcohol, matches, tobacco, salt, and lotteries, which brought in 33 percent of the revenues. Other indirect taxes yielded an additional 11 percent. The final 7 percent came from the proceeds of governmental enterprises, especially the forests, railroads, and postal system.

Detailed information on the investment pattern in 1938 is lacking.

Trends: 1938–53

The period since 1938 has witnessed two radical transformations of the Polish economy. As direct consequences of World War II, Poland suffered 4 to 6 million deaths, including a virtual extermination of her Jewish population.[13] Immense damage to physical property also took place. Building damage and destruction in central Poland alone amounted to about 7 percent of the country's entire national wealth in 1938.[14] In addition, the Soviet Union seized from Poland the Eastern Territories which had, prewar, held some 20 percent of Poland's area, and about 30 percent of its population, although they contributed only about 15 percent of the agricultural output and held but 10 percent of the industrial labor force.[15]

But Poland also gained from World War II. The former German lands placed under Polish rule were wealthy: their grain output equaled 44 percent that of all prewar Poland; they produced 82 percent as much bituminous coal, and 50 million metric tons of lignite as well. For other major commodities their relative output to that

[9] See table XI–1.
[10] See table XI–3.
[11] See table XI–4.
[12] See table XI–5.
[13] Mauldin and Akers (1954, p. 31).
[14] Estimated from data in Central Statistical Office (1949, p. 30).
[15] Mauldin and Akers (1954, pp. 15–17); Der Göttingen Arbeitskreis (1948).

of prewar Poland was as follows: Electrical power, 58 percent; rolled ferrous products, about 28 percent; agricultural machinery, 102 percent; and natural and artificial yarns, 71 percent.[16] In addition, the West, through UNRRA, provided massive aid to the relief and rehabilitation of Poland. During the years 1946 and 1947, UNRRA augmented domestic investment by at least 25 percent; overall, it added more than 5 percent to the resources available to the Polish economy.[17] Finally, the Polish Government still enjoyed a measurable degree of freedom from Soviet imperialism during the early postwar years, mid-1945 to late in 1948.

In consequence, Poland's economic recovery was rapid. The national income in 1938 zlotys was almost 40 percent higher in 1947 than in 1946. By the latter year, Poland had returned to 86 percent of the prewar level, exceeding that level by 26 percent on a per capita basis (table XI–1).

This recovery was accompanied by marked structural changes in the economy. The share of manufacturing, mining, and utilities in the origination of the national income rose from 23 percent in 1938 to 39 percent in 1947. Agriculture, forestry, and fisheries fell from 39 percent to 23 percent. Transportation and communications rose to 9 percent, while handicrafts fell to 4 percent. Only the share of services (22 percent) and construction (5 percent) remained relatively unchanged from prewar days (table XI–1).

These changes reflected shifts both in the distribution of the labor force and in relative productivities. Employment in industry rose 79 percent, largely at the expense of handicrafts; that in services remained about stable, while the numbers in agricultural pursuits and handicrafts declined, by 27 and 71 percent, respectively. In general, employment declined far less (20.5 percent) than did population (31.8 percent). Furthermore, while in the major sectors of industry and agriculture productivity was only 70 to 80 percent that of 1938, the *shift of employment*, largely from handicrafts, to industry, which was made possible by the capital resources acquired from Germany, resulted in a rise in productivity in the economy *as a whole* to 5 percent above the prewar level (table XI–1).

From the standpoint of expenditure, the changes in the Polish economy, 1938–47, were moderate. The most important comprised a decline in the share of defense (from 4.5 to 2.8 percent of the gross national product), and an increase in the share of investment (from 12.5 to 17.7 percent). With the share of private consumption being only slightly smaller than in 1938 (73 percent against 77 percent), and with a large per capita product, consumption per head was 20 percent higher in 1947 than in 1938 (table XI–3).[18]

The role of the Government in 1947 corresponded fairly closely to that in 1938 (table XI–5). Government expenditures, including investment transactions through banks and other indirect agencies, took about the same share (possibly 19 percent) of the national product.

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[16] Central Statistical Office (1949, p. 2); table XI–2; and Länderrat des Amerikanischen Besatzungsgebiets (1949, pp. 146–149, 279–280, 290, 301, 322).

[17] UN ECE, 1949, p. 231.

[18] This took place despite a 12-percent decrease in per capita food production because of a drastic shift from a net export to a net import status in foodstuffs. In 1937, Polish net exports of finished foodstuffs totaled 521,000 metric tons; in 1947, her net imports aggregated 612,000 metric tons, an overall difference in the balance of trade in foods of 1.1 million metric tons. (See table X–1, and Central Statistical Office, 1949, pp. 105–108.)

Transfer payments and administrative costs rose at the expense of defense, health, and education, but still remained modest shares of the national product. Governmental revenues, taking in only 11.4 percent of the national product, again failed to cover total expenditures by a wide margin. One change should be noted. Because of the elimination of the very wealthy, of the great estates, and of the large private corporations, taxation shifted markedly toward indirect taxes and profits from Government monopolies, and assumed a definitely regressive character.

Soviet influence on the Polish economy was notable only in the field of investment. The pattern of investment by sector in the 3-year plan of 1947–49 corresponded closely to that of the second 5-year plan in the Soviet Union (1933–38) : [19]

Percent of total investment

Sector	U. S. S. R. (1933–38)	Poland (1947–49)
Industry	37.1	37.9
Agriculture	19.1	12.6
Transportation and communications	16.4	22.2
Services	27.4	27.6

The advent of the Marshall plan, the defection of Tito, and the failure of the Berlin blockade eliminated Soviet hopes for an early collapse of Western Europe. The Soviet Union now had to prepare for a long pull. To meet this new situation, the captive countries of Eastern Europe had, on the one hand, to be secured for communism by the development of vast secret police and party apparatuses. On the other hand, now that even stagnation let alone collapse no longer could be forecast for the West, the captive countries had to assume great new burdens in accelerated industrialization, particularly the growth of munitions output, in expanded armies, and in tribute to the Soviet Union.

Nevertheless the rate of growth between 1948 and 1953 was barely half that between 1946 and 1948, although the rise in labor input was 14 percent in the later period against 6.6 percent in the earlier. Also, productivity in manufacturing, which increased 93 percent between 1946 and 1948, rose no further and is still substantially below the prewar level (table XI–1). But the successes of the Communist government in Poland in promoting heavy industry, in regaining prewar agricultural productivity and, above all, in siphoning off an enormous share of the national product to the state and to the Soviet Union are scarcely to be denied.

To present the data in more detail: The growth of the national income between 1948 and 1953 totaled about 46 percent, and derived in part from boundary changes. In 1953, the national income was 36 percent above that of 1938, compared to a median rise of 40 percent above prewar in Western and Mediterranean Europe. The rise in productivity has, however, been unusually high: 45 percent per man-year for every employed person. This rise has been effected, not by greater efficiency in individual sectors, but through structural changes

[19] Table XI–6 and Kaplan (1953, p. 52).

in the economy, with marked shifts from handicrafts and agriculture to other pursuits, especially industry and services. These changes were made possible, initially by the rehabilitation and more intensive use of former German facilities, and then by the construction of new facilities. By 1953, Polish glass output was nearly triple that of the combined territory of prewar Poland and Polish-occupied Germany; for rolled products, it was 57 percent greater; for coke, 30 percent; and for coal, 22 percent.

By 1952, industry was generating 43 percent of the national income, compared to 21 percent for agriculture, 19 percent for services, 9.1 percent for transportation and communications, 6.5 percent for construction, and 1.2 percent for handicrafts (table XI–1). The process of industrialization was further advanced than in the Soviet Union in the same year. Comparable statistics for the latter country were 44 percent for industry and construction jointly, 25 percent for agriculture, 9.4 percent for transportation and communications, and 22 percent for services.[20]

As indicated above, the pattern of expenditure of the national product was completely transformed between 1947 and 1952. In the later year, current Government consumption had risen to 32 percent of the gross national product. It was, in absolute terms, nearly four times as high as in 1938. The largest components of this sector, over 9 percent of the gross national product each, were "health and education" (including the expenses of the Communist Party), defense, and net transfers to the Soviet account. Government administration proper consumed about 4 percent of the product. The share of investment, now entirely in Government hands, rose to 23 percent of the gross national product; it was about 2.4 times as large as in 1938 in absolute terms. Finally, *private consumption fell to 45 percent of the gross national product. By 1952, it was* on a *per capita* basis, *only 85 percent of the 1947 level and about equal to that of 1938.* The expansion of health and education activities since 1948 has to some degree softened this decline in consumer welfare since 1947. Because of the impossibility of determining the share of Communist Party expenditures within this sector it is not feasible, however, to specify that degree.

Confirmation of the decline of private consumption is gained through an examination of the structure of household expenditures. By 1953, food took 64 percent of the consumers' budget compared to 48 percent before World War II (table XI–4). Also, according to the United Nations, the cost of living in Poland more than doubled between 1950 and mid-1953, while wages had risen only about 1.7 times.[21] The deterioration in housing too is significant evidence. In the years 1946 through 1950, inclusive, the Poles built not more than 130,000 urban dwelling-quarters.[22] Yet the urban population at the end of 1950 was 2.2 million persons higher than in early 1946.[23]

Between 1948 and 1952 Government expenditures soared. In the later year, they covered 62 percent of the gross national product, with only 6.8 percent being returned to the population as transfer pay-

[20] Estimates of the Department of State.
[21] U. N. E/ECE 174 (1954, pp. 65–66).
[22] Ibid., p. 68 (1949–53); 1947 data from Central Statistical Office (1949, p. 34). Estimates for 1946 and 1948 are lineal projections.
[23] Mauldin and Akers (1954, pp. 56, 123).

ments (table XI–5). Revenues have increased even more sharply; in contrast to previous Polish history, a slight budgetary surplus was achieved. Taxes, in constant prices, were 8 times as high as in 1947, and 7 times as high as in 1938. Sixty-eight percent of the revenues derived in 1952 from turnover taxes, laid basically upon consumer goods.

In the field of investment, the 6-year plan (1950–55) embraces only moderate shifts from the pattern of its predecessor (table XI–6). The allotment to industry has been increased to 43 percent of the total, while that of transportation and communications has been reduced to 15 percent. The other segments remain about as before. Thus the heavy emphasis upon maximum industrial output continues.

Summary

The economic history of Poland since the First World War has been characterized by extraordinary complexity. In general, at least six distinct phases may be recognized:

1. An early post-World War I phase (1921–26) characterized by fitful recovery, increasing foreign debt, and repeated hyperinflation.

2. A brief period of relative prosperity (1927–29) with marked economic growth, improved fiscal policies, and a favorable balance of trade, yet with serious weaknesses particularly in the domestic capital market.

3. A prolonged period of economic decline (1930–35) dominated by severe deflationary policies, high unemployment, and the increasing control of production and trade by the state and private cartels.

4. A few years (1936–39) of state capitalism, with rigid control of foreign trade and domestic prices, broad fiscal reforms including the introduction of progressive income taxation, and domestic credit expansion through large-scale governmental borrowing and other deficit financing. A substantial state investment program centered on heavy industry and transportation was launched. Industrial employment and productivity rose sharply, but agriculture stagnated both in regard to output and in regard to productivity. By 1938, Poland's national income had recovered to about the level of 1913.

5. The early postwar years (1945–48) were ones of rapid recovery, with tremendous resource accessions from Germany and substantial aid from UNRRA largely offsetting the human and material losses of World War II, including the Soviet acquisition of eastern Poland. By 1947, Poland's national income in 1938 zlotys had returned to 86 percent of the 1938 level. Through the absorption of the bulk of the handicraft workers in industry, the share of manufacturing, mining, and utilities in the national income rose to 39 percent. Agriculture was still only 60 percent that of 1938, but a shift from net exports to net imports in foodstuffs, and the moderate share of both current Government expenditures (9.4 percent) and investment (17.7 percent) in the gross national product, permitted the rise of private consumption per capita to a level 20 percent above prewar. The main expression of Soviet influence in this period lay in the structure of investment, which corresponded closely to that of the Soviet second 5-year plan.

6. The period of full-blown sovietization began in 1949. This had, in general, an adverse effect on the Polish economy. Between

1948 and 1953, the national income increased 46 percent, compared to 51 percent between 1946 and 1948. No further increases were realized in industrial productivity, which stagnated at some 85 percent of the prewar level. Further growth was being effected only through the input of man labor. At the same time, the return of agricultural productivity to about prewar must be recognized as an accomplishment. In general, Poland in 1953 had a national income 36 percent above that of 1938; 80 percent higher on a per capita basis because of the reduced population. By 1952, 43 percent of the national income was being originated in industry, compared to 23 percent prewar. The share of agriculture had fallen, over these years, from 39 percent to 21 percent.

The most profound changes in the period 1948–53 were effected in the national pattern of expenditures. By 1952, nearly a third of the gross national product was going for current Government expenditures, including almost 10 percent for defense and about 9 percent for net transfers to the Soviet Union—tribute, in a word. The share of investment had risen to 23 percent; thus, only 45 percent of the gross national product remained for private consumption. In consequence, living standards were at least 15 percent below the 1947 level. They were reduced to about the prewar position, with certain segments such as urban housing being even poorer. Partial compensations for this decline have been increases in health and education.

With so chaotic a history, with so many structural imbalances existing today, with profound uncertainties about future boundaries, no forecast of future economic growth in Poland appears possible. Obviously the great determinant will be politics rather than demography or resources. An assumption of Polish assent to decades more of Soviet imperialism appears historically implausible, while any other assumption is pure speculation.

5. EAST GERMANY (INCLUDING EAST BERLIN) [24]

The pre-World War II situation

In 1936, the territories now forming the captive state of East Germany—the so-called German People's Republic—comprised 22 percent of the entire area of Germany.[25] These territories had slightly more than a proportional population but a slightly smaller labor force, 24.1 percent and 22.4 percent, respectively, of the German total.[26]

Although the labor force in agriculture was only 19 percent that of Germany as a whole, it was exceptionally productive. The present East German lands gave the country 28.4 percent of its grain, 28.7 percent of its potatoes, and 43.8 percent of its sugar beets. Almost 18 percent of the nation's cattle and 24 percent of its swine grazed on its fields.[27] In industry too, this area played an important

[24] Based on data prepared by Mr. F. Sanderson, U. S. Department of State.
[25] Länderrat des Amerikanischen Besatzungsgebiets (1949, pp. 14–17).
[26] Ibid., pp. 14–17, 36–37. Data for May 17, 1939, allocated within the 1937 German boundaries.
[27] Crop data are 1934–38 averages while the livestock numbers are for 1936. (Ibid., pp. 124–138, 196–199.)

role, contributing 25.6 percent of the entire labor force in industry and handicrafts, and 29 percent of those in mining, large-scale manufacturing, utilities and construction. In 1938, East Germany (including East Berlin) produced 27.2 percent of all German gross industrial output, including 34.8 percent of the textiles and apparel, though only 19 percent of the minerals. Services, however, were more weakly represented than in other parts of Germany. Only 21 percent of the personnel in transportation, commerce, public and private services, and domestic work came from East Germany.[28]

The share of East Germany in German industry in 1936

Branch	Employment [1]		Gross output	
	Thousand persons	Percent of German total	Million reichsmarks	Percent of German total
1. Mining	145.7	16.6	1,609	19.0
(a) Fuels and nonmetallics (1)	110.0	18.3	964	21.7
(b) Metals (2)	36.0	13.0	645	16.0
2. Manufacturing	1,728.4	30.4	12,550	28.0
(a) Ferrous metallurgy (3)	140.3	22.9	806	19.0
(b) Machinery (4)	192.6	34.6	1,254	31.2
(c) Electrical equipment (5)	93.4	31.8	636	30.1
(d) Transport equipment (6)	44.7	26.8	446	26.1
(e) Other metalworking (7)	129.4	28.8	797	29.4
(f) Stone and ceramics (8)	168.8	29.8	648	27.6
(g) Lumber and woodworking (9)	99.0	23.7	513	25.0
(h) Chemicals (10)	95.7	29.6	1,103	28.0
(i) Paper and printing (11)	134.1	34.9	944	32.9
(j) Leather (12)	43.8	22.4	346	22.0
(k) Textiles and apparel (13)	421.2	36.9	2,861	34.8
(l) Food (14)	160.4	23.7	2,196	24.4
3. Electric and gas	44.8	27.3	622	27.6
4. Construction	387.7	31.8	2,278	31.8
Total	2,306.9	29.0	17,059	27.2

[1] Wage and salary earners, owners and family helpers; excludes cottage industries and handicrafts.
Source: Länderrat des Amerikanischen Besatzangsgebiets (1949, pp. 270–275). East Berlin estimated as 36.6 percent of all Berlin. Industrial categories as follows:
(1) I–II, (2) III–IV, (3) V–VI, (4) VII, (5) IX, (6) X, (7) VIII–XI–XII, (8) XIII–XVI, (9) XVI–XVII, 10) XVIII–XX, (11) XX–XXII, (12) XXIII, (13) XXIV–XXV, (14) XXVI–XXVIII.

In general, the income generated in East Germany in 1936 is estimated to have constituted a quarter of the all-German total. The largest contributor to the East German product in 1936 was industry (large- and medium-scale manufacturing, mining, and utilities) which originated 43 percent. Handicrafts and construction originated another 7.4 and 6.3 percent, respectively. From services came 25.7 percent, while agriculture, forestry, and fisheries generated 17.7 percent of the East German gross product at factor cost.[29]

The East German labor force in 1936 is estimated to have totaled 7,460,000 persons, including wage-and-salary earners, unemployed,

[28] See note 2.
[29] See table XII–1.

self-employed, and family helpers.[30] It is believed that, of this number, 1.92 million were employed in manufacturing, mining, and utilities, and 0.39 million in construction. The persons occupied in handicrafts approximated 0.91 million; those in services, 2.08 million; those in agriculture, forestry, and fisheries, 1.71 million. Possibly 455,000 persons were unemployed. If these estimates are adopted, the relative productivities of persons employed or occupied in the various sectors of the economy may be assessed. The highest productivity was in manufacturing, mining, and utilities, where it ran some 3,900 marks of income generated annually. This was about 2.7 times the productivity of the least efficient sector, handicrafts, in which much of the labor force consisted of family helpers, often unpaid. The annual productivities in construction (2,800 marks), services (2,200 marks), and agriculture (1,800 marks) were intermediate.

It is estimated that 64 percent of the gross product of the East German territories went, in 1936, to private consumption. Twenty percent went to the Government, for administration, the armed forces, health and education, and other current uses.[31] Gross investment took 15.4 percent, while the remaining 1 percent represented net payments to other parts of Germany and abroad.

Trends: 1936–53

East Germany shared in the general economic boom brought on by German rearmament and territorial expansion from 1936 to 1941. Thereafter, as the Germans met with reverses, the territory began to suffer drains of manpower and increasingly heavy bombing damage. In the final stages of the war, East Germany was the scene of intense ground combat, especially the Berlin campaign. After the German collapse, the large-scale removal of industrial equipment by the Russians, military requisitioning, private looting, and the flow of refugees from the east all combined to shatter the East German economy.

In 1948, when conditions were already considerably better, the gross product of East Germany was less than 72 percent of the 1936 level. Although the data are quite approximate, it appears that the sharpest decline was in construction, which was but a third that of 1936; industry was about 60 percent as high as in the prewar year; agriculture, roughly 70 percent. The services and handicrafts had returned approximately to their old levels.[31]

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[30] These estimates were developed as follows: (*a*) From 1933 and 1939 data on the labor force of all of Germany, figures for 1936 were interpolated for each component (agriculture, etc.) and for the total. The 1936 interpolated figures were then calculated as percentages of 1939, and these coefficients were applied to the direct East German data for 1939 to produce approximate estimates. Since the sum of the preliminary component estimates was smaller than the estimated total, the former were adjusted upward slightly, to give final estimates of 1.74 million for agriculture, 3.52 million for industry and handicrafts, 1.27 million for transportation and commerce, 0.66 million for public and private services, and 0.27 million for domestic service. For source see note 2. (*b*) An estimate of unemployment was developed by reducing East German employment in 1939 (6,485,000) cf. Statistisches Bundesamt, 1954, p. 540, by the same coefficient as that applicable to all German employment for 1936 in reference to 1939 (0.845), within constant boundaries. See Länderrat, etc., p. 478. Then, unemployment was calculated by applying the all-German rate (8.3 percent of all employment). Finally, the average unemployment pattern in West Germany for December 31, 1952, and June 30, 1953, was used in apportioning the estimated 455,000 unemployed between industrial, agricultural, and service occupations. (Statistisches Bundesamt 1954, p. 128.) The resulting distribution (65 percent, 7.5 percent, and 27.5 percent, respectively) of unemployed was then subtracted from each labor force category, to give figures for employed or occupied therein. (*c*) The figure for persons occupied in handicrafts was a residual of the industry and handicrafts total, subtracting those employed in industry and construction, and the unemployed.

[31] Table XII.

Only approximate and partial data on productivity are available for 1950, when recovery had progressed somewhat further still. In that year, the man-year income generated per person employed in industry and construction is estimated to have been 3,000 1936 reichsmarks, 83 percent of the prewar level. Productivity in handicrafts was about that of prewar. In agriculture, however, where the labor force was bloated by unskilled refugees to some 2.64 million, man-year productivity was only half that of 1936.[32]

The dominant feature in the use-pattern of the East German gross national product in 1948 was the enormous share of Soviet exactions: 18.5 percent of the entire total of goods and services produced in that unhappy puppet. The Communist Party apparatus and the East German Government took another 20 percent, as great a share as Hitler's regime. The share of gross investment was low, 6.4 percent. The residue, private consumption, was 55 percent. In fixed prices, the per capita private income of 1948 was two-thirds that of 1936, itself no boom year.[33] Small wonder that, in all the postwar years until 1950, East German deaths remained more numerous than births.

After 1948, the revival of the East German economy accelerated. The prewar level was regained in 1951, and surpassed by 6 percent in 1952 and 9 percent in 1953.[34] All sectors of the economy contributed to this recovery, but the role of industry was paramount. In all, the industrial origins of the East German gross national product in 1952 were closely similar to those of 1936: industry contributed 44 percent; service, 27 percent; agriculture, 16 percent; handicrafts 8 percent; and onstruction, 5 percent.[35]

In contrast to Soviet policy in Poland and Czechoslovakia, and because the point of diminishing returns in profitable exploitation seems already to have been reached in East Germany, the Soviets increased economic pressure for East Germany very little after 1948. In 1952, German net contributions to the Soviet account were only 9 percent greater than in the earlier year; they had dropped, as a share of the gross national product at market prices, to 14 percent. Also, private enterprise was permitted to retain a significant share of the region's economy; in 1952, 27 percent of all employment and 23 percent of all gross output in industry still came from private firms.

The share of government expenditures in the East German product remained a constant 20 percent between 1948 and 1952.

Gross investment rose sharply, from 6. 4 to 14.6 percent of the gross national product, tripling in constant value. In 1952, 51 percent of this investment was being devoted to industry (including stocks); 26 percent to housing and municipal facilities; 8 percent to transportation and communication; only 6 percent to agriculture, forestry, and fisheries; and the remaining 9 percent to services. Furthermore, in common with practice throughout the Soviet world, the utilization of

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[32] The labor-force data for 1950 are from Statistisches Bundesamt (1954, p. 539), with the following adjustments: (*a*) In agriculture an estimate of 685,000 family helpers was added, by assuming that family helpers constituted the same proportion of the agricultural-labor force as in 1946. These 31,000 persons (or 6.5 percent of 440,000 unemployed, ibid., p. 540) were subtracted from the sum to give the final estimate of 2.64 million; (*b*) the estimate for employment in industry and construction (2.34 million) was derived from the official figures for the labor force in industry, construction, and handicrafts (3,627,000), minus those occupied in handicrafts (980,000, ibid., p. 547) and minus 65 percent of the unemployed, or 310,000.

[33] Table XII.

[34] Statistisches Bundesamt (1954, p. 537).

[35] Table XII.

capital goods was intensified considerably. Thus, in 1952, the East German railroads transported 81.6 percent as many ton-kilometers of freight as in 1936, though only 60 percent as many freight cars and 44 percent as many locomotives were available.[36] Nevertheless, the shortages of equipment and materials were still so severe in East Germany in March 1953, that open unemployment totaled about 600,000, or over 9 percent of all wage and salary earners.[37]

From the standpoint of the population the most important change after 1948 was the increase in per capita consumption, despite a moderate drop (from 55 to 50 percent) in private consumption as a share of the gross national product. By 1952, consumption per head had risen to 81 percent of the 1936 level. The prices of food, drink, clothing, and household goods all dropped significantly; housing alone showed little improvement.[38] These facts are basic to understanding the uprising of June 17, 1953—it represented a spontaneous, violent reaction to the reimposition of pressures *after* a fairly prolonged period of rising, albeit low, standards of living.

Summary.—In 1936, the areas that were to become East Germany (including East Berlin) constituted about a quarter of the German economy, somewhat more in industry and agriculture, somewhat less in services. Since the end of World War II, the dominant factor has been the Soviet attempt to squeeze maximum profits from this region. The maintenance of Communist state panoply has also been important. The rehabilitation of the East German economy has been given little emphasis. In consequence, the gross national product of East Germany in 1953 was only 9 percent higher than in 1936 (and unquestionably below the 1938 level); agricultural productivity far below prewar and high urban unemployment have persisted.

Nevertheless, the Soviets have had to moderate their demands since 1948 to keep the German goose viable. Living standards rose from 66 percent of the 1936 level in 1948 to 81 percent in 1953, enough to give the East German workers some strength of spirit as well as body. Attempted speedups and other increases in Soviet economic pressure in 1953 were met with the heroic resistance of June 17, setting a dangerous precedent for the Soviet bloc.

Even more than in the case of Poland, the distant extrapolation of East Germany's economy is an idle exercise.

K. Forced Labor in the Soviet Bloc

INTRODUCTION

Notwithstanding the denials of the Soviet Government that forced labor exists within the Soviet Union and its captive countries, and despite the strict censorship of news and control of travel that has prevailed in these countries, the fact that a system of forced labor is being carried out has been attested to by students of the Soviet economy, by the investigation undertaken by an ad hoc committee on forced labor of the United Nations,[39] and by reports and testimony of those who witnessed or experienced living under conditions of involuntary

[36] Ibid., p. 549.
[37] Ibid., p. 540. Assumes about 40,000, or the 1947–50 average, in East Berlin.
[38] Ibid., pp. 552–553. Also U. N. E/ECE 174 (1954, pp. 64–66).
[39] United Nations. All Hoc Committee on Forced Labour Report * * * submitted to the Economic and Social Council of the United Nations and the Governing Body of the International Labour Office. Geneva, 1953. 619 p.

labor. Although censorship of news by foreign correspondents has eased somewhat since Stalin's death, it has not been lifted to the extent of allowing a discussion of prison camps or the authority in charge, the Ministry of Internal Affairs (the MVD).

The ad hoc committee's thorough and painstaking report, which covered the extent of forced labor throughout the world, concluded that, "forced-labor systems used for political coercion or in the interest of the national economy exist in the Soviet Union and four other Iron Curtain countries." This conclusion was based on a study of the laws of the countries, and on information from documents and affidavits presented by various government officials or private individuals. Countries found to have penal legislation constituting bases for forced-labor systems to be used for purposes of political coercion or economic expediency were Bulgaria, Czechoslovakia, the Soviet Union, Rumania, and Poland.

An examination by the ad hoc committee of the decrees, regulations, laws, and codes of the Soviet Union, presented by representatives of the free world, revealed that a system of forced labor has been established which had its inception in 1918.

> According to the allegations, the Soviet penal system constitutes the legal basis of a system of forced labor designed to oppress and reeducate those who disagree with the ideology of the regime in power.

The Soviet representatives, on the other hand, denied that forced labor exists in the Soviet Union, and that the aim of the penal and labor codes is not to punish the offender but to reeducate him so that he might become a law-abiding citizen to a Socialist society. Such reeducation is accomplished through corrective labor performed during the period for which sentenced.

HISTORY

Forced-labor camps were established for the purpose of punishing and isolating class enemies, the elimination of which was most desired. Shortly thereafter the belief that these prisoners could be put to use to the advantage of the state began to develop. During the early 1920's a "corrective" labor policy was initiated, culminating in the issuance of the first corrective labor code in 1924. The old prison system was abolished and its place taken by a network of colonies for offenders who were put to work in factories, workshops, and on farms. Besides being subjected to compulsory labor, the prisoners were given political education. However, these two methods of reform, involuntary participation in work of benefit to the state and society and political reeducation to influence the minds of the convicted to accept the Socialist regime, were not coordinated. The code of 1924 was also found to be defective in that no clear distinction was drawn between class enemies who should be suppressed and convicted workers who needed reeducation—

> to accustom them to work and live as members of the laboring community and to bring them into association with Socialist construction.

In 1933 a new corrective labor code was issued which emphasized the separation of these two types of prisoners. It appears that—

> at this time the corrective labor institutions assumed an economic importance which, apparently, had hitherto been lacking, and began to play a part in the national economy.

"CORRECTIVE" LABOR

"Corrective" labor is imposed upon those who are convicted of crimes against the state as well as ordinary criminal actions. The corrective labor policy is set forth in both the corrective labor code and the penal code. Its aim is to prevent offenders from committing acts harmful to socialist construction, and from committing further crimes. Reeducation and influences are brought to bear to adapt the offenders, through organized and directed work, to conditions of a communal life in a people's state.

The penalties accompanying conviction with corrective labor depend upon the degree of the offense, and the degree of class danger which the convicted person represents. Three types of corrective labor are mentioned in the penal and corrective labor codes: (1) corrective labor without deprivation of liberty; (2) exile with corrective labor; (3) deprivation of liberty with corrective labor.

The first of these is imposed upon persons whose offenses are not considered serious and who are not a threat to "society" to such an extent as to need isolation from it. The sentence may be for a period of 1 day to 1 year, to be carried out either at a worker's normal place of work or within a specified distance from his residence. The offender may be placed in an industrial plant or a mass-production unit, or may be assigned to seasonal work in agriculture. Disciplinary measures accompanying the sentence include deduction of wages (to a maximum of 25 percent); suspension of leave; loss of recognition of time served for purposes of probation periods, grants of pensions, wage increases for length of service, and additional holidays.

Exile with corrective labor generally applies only to political enemies of the state. The importance of exile was explained by B. S. Utevski in Soviet Corrective Labor Policy (Unified State Publishing House, 1935):

> The importance of exile as a punishment increased in the reconstruction period when the accentuated opposition of class-hostile elements to socialist construction made it necessary to find new ways of countering such opposition. At the same time the possibility of organizing exile on the principle of providing persons sentenced to this penalty with a reeducation in labor on large-scale socialist construction projects in distant areas of the Soviet Union which were in need of manpower provided opportunities of so arranging exile that, while acting as a powerful repressive measure, it also served to instill a sense of discipline in workers who committed serious crimes.

Sentences imposing exile range for periods of 3 to 10 years, to be served in labor on public undertakings on a contract basis between the undertaking and the corrective labor institution; on special undertakings of the corrective labor institution; on mass work contracted for between state authorities and the corrective labor institution; and on mass work in colonies. Mass work in colonies applies also to persons sentenced to corrective labor with deprivation of liberty. However, persons serving a sentence of exile in mass labor colonies are not subject to the restrictions placed upon those deprived of liberty.

Freedom is not wholly regained upon release after serving a term in a corrective labor institution. In many cases released persons may not be allowed to go outside a certain restricted area and are under constant surveillance by the MVD. These people are numbered among the "spetsi," described by Harrison Salisbury, a former correspondent from Moscow for the New York Times. Their passports,

identification papers, and labor books show that they have been inmates of a labor camp as well as the location of the camp. Such papers must be presented when seeking employment. In many cases the seeker may be considered a dangerous element, making the attainment of work a difficult matter. The only alternative is to return to work on state projects under the authority of the Ministry of Internal Affairs, the agency which has charge of the undertakings and workers of the corrective labor camps.

Mass deportations of great numbers of persons within the borders of the Soviet Union and from the captive countries to northern and eastern regions of the Soviet Union have placed in exile victims of the ruthless policy of the state to divide and weaken potentially dangerous elements. Migrations have been enforced for economic reasons also. These deportees are not persons who have committed any violations of the laws or been sentenced to punitive labor. Material presented to the ad hoc committee on forced labor gave evidence of this practice of moving whole colonies of people, but the committee did not feel that there was enough definite information to substantiate the charge that deportees were or are at present being detained in labor camps, and therefore the question of deportation and exile was not one to be considered with that of forced labor.

Nevertheless, the lack of freedom of movement beyond restricted areas under the authority of the MVD compels the deportees to seek work within a limited field of opportunities, generally limited to work for the state.

These involuntary residents are the "spetsi," mentioned above. The "spetsi" were the subject of the article (one of a series) by Harrison Salisbury which appeared in the New York Times for September 28, 1954. He commented that a great deal has been said about forced labor camps but very little attention has been paid to the "spetsi." The "spetsi," meaning, according to Salisbury, persons who live under "special residence conditions," within limited boundaries, are "the millions of citizens of the Soviet Union who, somehow or other, by their own actions or more likely by accident of geography, residence, or nationality have fallen afoul of the Soviet authorities and been sent off to live in some distant and usually unpleasant locale." They also include nationals from the Baltic States, removed from their native land as a measure of security by the MVD. They are found particularly in central Asia, Siberia, the far north, and the far east, regions where voluntary settlers will not go because of harsh living conditions. These people are not in the true sense of the word "forced laborers," for they may work wherever they can get a job and may live wherever they can find shelter within the area to which they are restricted. To all intents and purposes, however, they are prisoners of the state, subject to the authority of the MVD.

Mr. Salisbury reported that since Stalin's death, no large numbers of Soviet citizens have been sent into exile, but there has been some transfer of exiles from the captive countries. Nevertheless, Mr. Salisbury points out, the uprooting of masses of people will continue so long as the present prison system exists and so long as the MVD needs workers for the mines, mills, and farms under its authority.

Under the third type of corrective labor, punishment for crimes, political or ordinary, which calls for corrective labor with deprivation

of liberty, is based on the degree of the offense committed and the extent of danger which the offender presents to the socialist society. The report of the ad hoc committtee states that, at least since the 1930's, there seems to have been two types of institutions for persons who have been sentenced to deprivation of liberty with corrective labor. Sentences of 3 years or less are served in corrective labor colonies, while those of over 3 years are served in corrective labor camps. The corrective labor code provides, however, that if the court so orders, persons sentenced to more than 3 years' labor may be received in the colonies rather than the camps. The maximum penalty with deprivation of liberty is 10 years. For cases of espionage, wreckage, and diversionary acts the period may be longer, but not to exceed 25 years.

The corrective labor colonies receive persons who have been convicted by a court or by a special decision of the MVD. It should be noted that, under the corrective labor code and by ordinance, in some instances persons may be sentenced to concentration camps solely by administrative orders of the MVD, without having been accorded a hearing and trial in a court of law. This extrajudicial power arbitrarily administered places individual freedom in jeopardy and completely annihilates the democratic principle that a person is innocent until proven guilty.

The colonies, which are considered "the basic type of place where persons are deprived of liberty," are themselves broken down into three different types: (1) Factory and agricultural colonies—organized to train people in labor habits, to educate them politically, and generally to familiarize them with life and work in an organized community; (2) mass-labor colonies in distant areas—established to receive persons who constitute a class danger necessitating more severe conditions; and (3) punitive colonies—established to receive persons who were previously in other colonies and had shown insubordination to the regime or labor discipline.

Whatever the results of corrective labor may be, insofar as influencing and reeducating the workers, it is apparent that the practice of using forced labor has been an effective means of accomplishing construction and production for the state where labor is difficult to get and at greatly reduced cost.

NUMBER OF FORCED LABORERS

The Soviet Union has closely guarded any information as to the number of persons who committed infractions of the law and were sentenced to compulsory labor. Official figures never have been published. Estimates have been made at various times by writers and by persons who have escaped from concentration camps to the Western World. A House document prepared in 1946 (Communism in Action, H. Doc. 754, 1946) reports on page 56:

> The following estimates come from a variety of sources. They differ very widely because of the different sources of information of the estimators and the different years in which the estimates were made; but they all attest to the existence of the institution of forced labor and of camps conducted under harsh prison conditions and they all count the victims in the millions—not only at any one time but also year after year.
>
> Lyons, 6 million in 1933; Dallin, 10 million in 1940; Barmine, 12 million in 1938; Souvarine, 15 million in 1937; Ciliga, 10 million in 1937; Kravchenko, 18 million in 1941; Koestler, 17 million in 1943; White, 14 million in 1945.

Other estimates have run all the way from a conservative 1,830,000 to as many as 20 million. Estimates for a single year have differed, as shown by Michael Rozanoff's claim that 11,050,000 prisoners were held by the Soviet Union in 1941 (cited in Tensions Within the Soviet Union, S. Doc. 69, 1953, p. 78) against Kravchenko's estimate of 18 million.

However, to place the number of concentration camp inmates as high as 15 million to 20 million is regarded as fantastic by at least two students of the Soviet economy. Such figures, or even only 12 million, would imply that one-third of the country's men of working age were imprisoned. It is the belief of one of these writers that there were perhaps as many as 3.5 million prisoners employed in forced labor in 1941; the other writer thinks that there were about 5 million for the period from 1947 to 1951.

Naum Jasny, after a study of the State Plan of Development of the National Economy of the U. S. S. R. for 1941, based his figures upon an interpretation of the data presented therein. He cautioned "that the compilations made with the help of these interpretations necessarily involve a great deal of estimation, partly or even largely arbitrary, and the conclusions at best will be within a rough range of approximation".[40] He summed up the number of concentration camp inmates employed in all economic activities of the NKVD (now the MVD) according to the 1941 plan to be 2,322,000. He continued:

> Assuming that 20 percent of the employed concentration-camp inmates worked in enterprises other than those of the NKVD, the figures of 2,322,000 computed above for the inmates employed in the enterprises of the NKVD rises, after rounding, to 2,900,000. * * * There still remain, however, considerable numbers of concentration-camp inmates used for servicing those who are employed in gainful occupations, such as office clerks, cleaners, cooks, medical personnel, etc., and even internal policy. With those persons considered, the total number of concentration-camp victims used for work may have been as high as 3½ million. This figure does not include children, full invalids, people too old to work, etc. I have no evidence by which to estimate them.[41]

The other writer, Eugene M. Kulischer, made the following deduction:

> An indirect approach to a plausible estimate of the number of forced laborers is to attempt to gage the full complement of "deportees," including those in concentration camps, by comparing election data with figures on the general population * * * From the total adult Soviet population (those 18 years of age and over) for 1947, 1950, and 1951, let us accordingly subtract voters registered in the elections of 1947, 1950, and 1951. Since registration is compulsory, this yields the number of nonvoting adults—about 13 million. In order to obtain the number of deportees (in and outside of concentration camps), three other groups of nonvoters must be excluded: Aliens * * *; persons omitted in the process of registration * * *; and the insane, ordinary criminals disfranchised for 5 years, and persons under investigation (totaling approximately 3.5 percent). The remaining nonvoting population for each of these 3 years amounts to about 9 million persons—a total which includes not only inmates of concentration camps, but also deportees who were never in concentration camps and those who have served their time or have been pardoned. * * *
>
> How many, then, of the residual 9 million mentioned above really are forced laborers living in the notorious concentration camps? A pure guess would be 5 million; it seems the maximum compatible with the mass of deportees to be found outside of concentration camps throughout the Soviet Union and with what we otherwise know about social and demographic conditions there.[42]

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[40] Jasny, Naum, Labor and Output in Soviet Concentration Camps. Journal of Political Economy, October 1951, p. 407.
[41] Ibid., pp. 415–416.
[42] Kulischer, E. M., Russian Manpower, Foreign Affairs, October 1952.

All these estimates deal with the number of persons sentenced to labor in concentration camps or colonies, but if the term "forced labor" is broadened to include persons sentenced to corrective labor without deprivation of liberty to be carried out at their normal place of work, the figure for victims of the system of compulsory "corrective" labor would no doubt be higher. Again, there is no way of knowing how many are in this category from day to day or month to month.

ECONOMIC IMPORTANCE

As has been stated, forced labor has been used for economic purposes in helping to increase production in all branches—in agriculture, in industry, in the mines, in forestry, in road and railroad building, and in construction of public works.

Representatives of various countries presented material to the United Nations Ad Hoc Committee alleging that forced labor in the Soviet Union is not only valuable as a means of rehabilitating the class hostile elements, but also as a factor in the economic achievements undertaken by the state, by supplying a source of cheap manpower and making possible a corps of workers to develop and exploit undeveloped areas. On the basis of the information submitted, the Committee concluded that the work of prisoners is important to the national economy of the Soviets and plays a significant part.

It is evident from several Soviet sources that, since about 1930, the work of both political and other prisoners has been used in the Soviet Union for large-scale public works (e. g., canals, railways, and roads), for the development of vast areas with abundant and hitherto unexploited resources of raw materials, and for the economic development of previously uncultivated regions. Several Soviet authors have also stressed the great importance for the national economy of the work done by the corrective labor camps and colonies. This information from Soviet sources actually relates to conditions existing before the Second World War, but nothing either in the statements made in the Economic and Social Council by the representatives of the U. S. S. R., the Byelorussian S. S. R., and Poland on the work of prisoners or in other information which the Committee has been able to obtain would seem to indicate that the situation is different today. It is also clear from the most recent testimonies examined by the Committee that during the war and even after, persons sentenced to corrective labor were still used on large-scale projects or in big industrial and farming undertakings.

Mr. Salisbury's report in the New York Times shows that as recent as 1954 there has been no change in the policy of using prisoners on public works and in agriculture, mining, etc.

The Committee, however, would not attempt to estimate the extent of the value of the labor of prisoners nor to "assess its relation to the entire economic activity of the country," since definite conclusions can be made only on statistics which in this case are unobtainable.

By far the greater proportion of prisoners are located in camps or colonies under the authority of the Ministry of Internal Affairs (the MVD, formerly the NKVD). An estimate of the amount of capital construction to be performed by forced labor was made by the United States from data contained in the State Plan for the Development of the National Economy of the U. S. S. R. in 1941. This plan showed that 14 percent of the capital construction for that year was assigned to the NKVD, and that the actual percentage of capital construction by means of forced labor was even higher because indications were that some of the prisoners were farmed out to projects financed by other government agencies. A Russian refugee,

formerly with the central agency in charge of the various 5-year plans (Gosplan), testified that from one-tenth to one-half of the total production in certain industries was scheduled to be produced under NKVD authority in 1941.

Although forced labor has been used extensively throughout the Soviet Union on a great number of projects, the economic value of such labor is doubted by two students of Soviet affairs.

Eugene Kulischer, in his article, Russian Manpower, expresses the belief that the Soviet Government does not expect to profit from forced labor. The productivity of a forced laborer is undoubtedly a great deal less than that of other workers. Forced labor may be economically useful in regions where free labor will not voluntarily go, but the work to be performed in these outlying districts would require only a fraction of the number of persons sentenced to concentration camps. Kulischer believes that millions have been sent to camps not because they are needed but because the Soviet would rather risk the economic and social loss of imprisoning them than to run the political risk of allowing them to be at large.

Naum Jasny gives his reasons for believing that concentration camps are a liability rather than a source of profit in his article, Labor and Output in Soviet Concentration Camps:

1. Concentration camps diminish the number of persons outside who share the burden of paying for the government's expenditures, due to low consumption levels and low wages.
2. Underuse of skills of inmates and rate of mortality in camps are losses to the economy.
3. Time is wasted in moving inmates from location to location to work on government projects.
4. Indirect loss is incurred by removing people from their normal occupations which were profitable for the state.

The only economic advantage of concentration camps that Naum Jasny sees is "the opportunity to move this labor to places and to use it for work where and for which free labor would be difficult or impossible to obtain."

Richard Carlton, in writing about the captive countries, has this to say about the economic value of forced labor:

> The importance of forced labor is often questioned with the remark that it must be extremely inefficient. This is certainly true in the classical economic sense, for without initiative and cooperation no large body of workers can perform as efficiently as if they were free. Nevertheless, it must not be forgotten that the satellites use their controlled pool of forced labor wherever normal recruitment methods would have failed (*a*) because of the time needed to induce free laborers to move, and (*b*) because free laborers would not willingly work for the pay offered and under the conditions required. The essential function of forced labor is to supply manpower for the industrialization programs. This manpower can be rigidly controlled and arbitrarily assigned. Forced labor is highly productive in that it is almost invariably allotted to key segments of the development plans. It is also vitally important in the inflexible totalitarian economy in that it often provides the sole means of recruiting new labor. In a sense, the forced laborers are the shock troops of the 5-year plans.[42]

Another factor which contributes to economic waste is the fact that the policing of the whole network of camps and colonies requires a large number of MVD guards. The expense of maintaining these armed guards is considerable and an added burden to the economic structure of the country.

[42] Carlton, Richard. The Economic Importance of Forced Labor in Eastern Europe. New York, Mid-European Studies Center, June 28, 1954, pp. 15–16.

The pressure of the whole corrective and penal labor policy of the state upon the workers and their living standards has broad repercussions. The ever-present threat of being penalized or convicted for violating the laws or regulations, however minor, creates uncertainty for the future and tends to build up a feeling of futility and instability. With no incentive for planning ahead, the propensity to save is severely curtailed; the desire to spend income on a current basis for whatever is available places great pressure on the demand for goods. This demand, accompanied by a chronic shortage of supplies, has given rise to black markets of rather large proportions.

Whatever may be achieved economically by the use of compulsory labor of victims of the penal system, the fact remains that under Communist domination the freedom, dignity, and worth of the individual is disregarded in the drive for industrial expansion demanded by the regime.

RESTRICTION ON "FREE" LABOR

"Free" labor as it is recognized in the democratic countries does not exist in the Soviet bloc. Workers in the Communist countries are much more regimented and are subject to dictatorial rules and regulations established by the state. In the Soviet Union unjustifiable absence from work for even 1 day has been punished by corrective labor at the regular place of employment accompanied by a reduction in pay up to 25 percent. In the captive countries, absence has not been so severely dealt with. For example, in Poland 1 day's absence is reprimanded, with possibility of a fine amounting to 1 day's earnings. (See Poland: Law on Labor Discipline, in notes on labor abroad, U. S. Department of Labor, December 1950, p. 24.) Tardiness of more than 20 minutes without a valid excuse constituted an absence. The regulations governing absenteeism and tardiness have not appeared in the published laws of recent date, but there is no indication that they have been formally repealed. It would seem that presently these violations are dealt with by disciplinary action. Labor mobility on a voluntary basis is curbed by legislation placing restrictions on leaving jobs. Transfers of workers, particularly skilled and scientific workers, become mandatory upon orders from Government department heads, regardless of the desires of the workers. Trade unions exist only in name and have become an arm of the state to carry out the policies of the regime, not to represent and promote the interests of the workers.

Restrictions on the freedom of employment have been caused by governmental actions. Enforcement of regulations set forth by the Government has resulted in reducing the gap between the status of free and forced laborers. A list of restrictive regulations that effect the aims of the Government to mobilize and discipline labor shows the extent to which labor is regimented.

(*a*) Strikes are not forbidden by law, but are practically impossible, because of ruthless suppression as sabotage;

(*b*) Legislation dated December 20, 1938, introduced workbooks, in which all breaches of labor discipline committed by the holder are inscribed. This book must be produced before a worker can be hired;

(*c*) Under legislation dated June 26, 1940, workers are not allowed to leave their jobs without permission from the administration of their undertaking or institution;

(*d*) Legislation dated October 2, 1940, stipulated that every year a contingent of young persons must be drafted into the vocational-training centers and that, once their studies are completed, they must be sent for 3 or 4 years to work in undertakings or institutions. Provision is also made for persons graduating from universities and specialized schools to be assigned to jobs in a similar manner;

(*e*) The compulsory transfer of workers from one area to another has been authorized by legislation dated October 19, 1940;

(*f*) The labor cade and legislation dated June 8, 1946, on the fulfillment of the plan, allowed overtime to be required of workers.

Failure to comply with the provisions of these laws is considered a breach of labor discipline, punishable upon conviction. For example, appointed trainees who refuse to enter training, or who leave centers of training without permission, may be sentenced to a labor colony. Workers who refuse to transfer to other undertakings, or who leave work without authorized permission, may be imprisoned. Punishment for infractions of the laws is extended to include managers and heads of departments who fail to report cases of violation, inflict prescribed penalties, or who hire persons without authorized permission to leave former jobs.

After a study of the material submitted and the allegations made by the several free-country representatives, the ad hoc committee reached the conclusion that—

such measures, applied on a large scale and in the interests of the national economy, lead * * * to a system of forced or compulsory labor constituting an important element in the economy of the country.

The shortage of the labor supply and the utilization of manpower for industrial use were problems which were faced as far back as the 1930's. The effort to secure a greater labor force led to the policy of tightening the restrictions on the freedom of workers to accept or reject employment. Unemployment was not to be tolerated and the unemployed were not permitted to refuse any kind of work available, whether suitable or not, except for reason of illness. The labor exchanges, the Government employment agencies, were empowered to remove from their lists names of persons refusing to take jobs, thus in many cases depriving them of any chance to work. At the same time unemployment benefits were "suspended." This move was justified by the announcement that there was no more "unemployment." To date, unemployment does not exist officially and, as a result, unemployment compensation has been completely eliminated.

The suspension of unemployment benefits was a means of pressure to force the unemployed worker to accept any job offered, even if it was outside his trade, beneath his skill, and far from his place of residence.[44]

There has been evidence in recent years that these restrictive laws have been evaded, particularly in those industries where there is a heavy productivity schedule and a shortage of labor. The Soviet press in 1952 reported the censure by the Central Council of Soviet

[44] Schwarz, Solomon M. Labor in the Soviet Union. New York, Praeger, 1951.

Trade Unions of the housing and transport-machine-building industries for their "weakness in labor discipline." Other press reports complained of the tolerance being shown by managers toward absenteeism and tardiness, and the laxity with regard to workbooks. It was found that absentees and latecomers in many instances were not reported and turned over to the courts for trial. Workbooks were not being kept up to date, nor were they being demanded by management, thus permitting workers to leave or accept jobs without authorization. This defection of truancy and "floating" is one of the causes for concern to the Government in striving to overcome a weakening of its power to regiment workers in the effort to heighten production.

The impossibility of policing every corner of the industrial sector gives rise to the practices referred to in the complaints appearing in the press. Evasion of the laws is apparently a publicly acknowledged fact, but it must be borne in mind that the laws are still in effect and may be applied at any time the party desires to enforce them within any one area.

Further restrictions on the freedom of labor are found in the practice of drafting hundreds of thousands of youths of both sexes between the ages of 14 and 19 for industrial training. Assignments to the different training centers are made by the authorities without regard for personal preference. After the period of training, the draftees are obliged to work for Government plants for 4 years.

In similar fashion, professionals upon graduation from universities are given assignments by the ministries in charge of the schools, regardless of individual choice. These assignments are for periods of 3 to 5 years.

Collective bargaining in the Soviet Union is another example of the absence of free labor conditions. Collective agreements were reintroduced in 1947 as a matter of policy after a lapse of 14 years.[45] The agreements are not the result of negotiation between employees and employer, but are forms drawn up by the authorities, implementing the regulations governing labor and production.

> The new rules positively require that "the rates of wages, of piecework, progressive piecework, and bonuses as approved by the Government must be indicated" in the agreement.
>
> * * * * * * *
>
> As before, the new regulations are based on the assumption that "the interests of the workers are the same as the interests of production in a Socialist state" and that the collective agreements are designed to be the "juridical form of expression of this unity." Accordingly, a model agreement is drafted by each ministry upon consultation with the central offices of the appropriate trade unions. Then the model agreement is sent as a fait accompli to the establishments concerned.[46]

The purpose of the collective agreements is described by Schwarz [47] as follows:

> Today, collective bargaining in the Soviet Union is consciously not designed to defend the interests of wage and salary earners. As stressed by Trud, the official trade-union paper, in an editorial dedicated to the reintroduction of collective contracts: "As the guardian of workingmen's interests we have the Socialist state." Therefore the purpose of collective agreements consists not in the pro-

[45] Gsovski, Vladimir. Elements of Soviet Labor Law. (Monthly Labor Review, March, April 1951. (U. S. Department of Labor, Bureau of Labor Statistics Bulletin No. 1026.)
[46] Gsovski, op. cit.
[47] Schwarz, op. cit.

tection of labor, but "in guaranteeing the fulfillment and overfulfillment of the state production plan for the given establishment." Hence "the main stipulation of the contracted obligation must be an increased demand from every worker. Without strengthening labor discipline and without ruthless struggle against the violators of state and labor discipline—grabbers and loafers—there can be no real fulfillment of obligations laid down in the collective agreement."

GENERAL OBSERVATIONS

The compulsory and restrictive features of the labor policy of the Soviet Union are geared to the political and economic aims of the Government. On the one hand, there has been repression of people thought to be dangerous to the Communist Party to help insure its continuance in power. By means of enforced corrective labor and indoctrination, the regime has attempted to mold the wills and minds of hundreds of thousands of victims.

On the other hand, the struggle to expand industrial production has created the demand for a large supply of labor which led to the allocation of manpower at the expense of the independence and freedom of workers. The forced labor system of the Soviets has provided a way to punish or liquidate "undesirable" elements among its ranks, but it can also be presumed that the demand for forced labor causes the use of penalties to a greater or less extent as circumstances warrant.

The vast police empire must have a natural inclination to maintain and even expand its activities. Its leaders are probably eager to lay their hands on interesting projects and the next step is to round up or retain the necessary number of prisoners. There are enough laws and decrees and their provisions are flexible enough to increase the camp population simply by insisting on a more severe and comprehensive enforcement policy. In such a case minor infractions which might otherwise have gone unnoticed will lead to long forced labor terms, and unscrupulous agents of the judicial and police systems will frame innocent people in order to curry favor in the eyes of their superiors. The dangerous combination of judicial and police power with "big business" in one single administration—the MVD—is one of the reasons for the magnitude of the Soviet forced labor system.[48]

The effect of the forced labor system and restrictive labor policies upon the economic development of the country cannot be accurately determined. Undoubtedly the productivity of forced labor is adversely affected by a number of circumstances,[49] such as the overhead cost of police administration, the time spent by prisoners in jail and being transported from camp to camp, the nonutilization of skills of camp inmates, poor administration of the camps, and work time lost through ill health and maltreatment. The forced labor system affects the productivity of nonslave labor, also, "because of the anguish it causes the relatives and friends of the prisoners and because of the ill effects on the health, morale, and training of former prisoners." The possible shortening of the lives of former inmates of camps also creates an economic loss.

Under these circumstances it is highly doubtful whether the forced laborers' net product available for investment and public consumption (such as military use) is larger than that of an equal number of free workers. But even if it should be larger, it would be simple to reduce private consumption of the nation as a whole through taxation and loans by a corresponding amount. An infinitesimal reduction in the consumption of the free population would bring about the same relation between private consumption and investment (plus public con-

[48] U. S. Information Service. A Red Paper on Forced Labor. U. S. Government Printing Office, 1952, p. 29.
[49] Ibid., p. 28.

sumption) that is now achieved through the starvation of several million prisoners surrounded by a large unproductive police apparatus.[50]

It is apparent that the living standards of the Soviet people have suffered because of rigid controls. Certainly the dignity and welfare of the individual have been subordinated to the intensity of the drive for large-scale industrialization.

The Soviet Government was avowedly formed on the principle of equality and the belief that the state belongs to the people who work and produce. It is hard to reconcile actual Soviet labor policies and the uncertain and oppressive conditions under which its inhabitants are compelled to live with such principles.

L. PETROLEUM AND THE MIDDLE EAST

In any overall plan for the security of the free world, the assurance of adequate supplies of petroleum is one of the first essentials. Petroleum in terms of its products serves many purposes. Chemical science and engineering have made such progress in breaking down crude oil into basic constituents that an enormous variety of essential substances now are derived from it. The industrialized West may even be said to represent an oil culture. Petroleum in one form or another has come to exceed the value of any other commodity in commerce. Its principal contemporary importance lies in the fact that it is a basic prerequisite to mass movement. To a certain extent this is due to a number of synthetic derivatives, notably rubber. It is most important, however, in terms of fuels and lubricants. Thus, while it is vital to the activities of a time of peace, it is even more essential to the conduct of war. Atomic forces in time may partially supersede those now derived from petroleum, but in the foreseeable future oil is power. Any optimistic outlook for the free world rests on the availability to the nations of the North Atlantic Treaty Organization of adequate supplies of petroleum at all times and under any circumstances.

The factor which aggravates oil-supply problems is the very uneven distribution of known petroleum deposits in the earth's crust. Oil surveys have not been completed to an extent that would justify definitive conclusions as to the existence, size, or accessibility of deposits in many parts of the globe. Apparently oil may occur wherever there are deep sedimentary rock strata. Even so, it is probable that oil deposits of commercial value occupy relatively small areas.

It is the greatest of good fortune that more than one-third of the world's oil resources, according to late estimates, lie within the Western Hemisphere. Of these the United States possesses more than half—some 29 billion barrels of recoverable oil. To these reserves can be added those of Canada, amounting to some 2 billion barrels. With slightly more than one-fourth of the proved oil reserves of the world and a much smaller proportion of what usually are estimated to be the ultimate potential global reserves, the United States in time of comparative peace consumes approximately two-thirds of all the oil used in the world.

The whole of Latin America, including Mexico, is estimated to possess about two-fifths as much oil as the United States plus Canada. Ordinarily the bulk of Latin American production flows to the United

[50] Ibid., p. 28.

States. Whatever importance this may represent in time of peace would be many times increased in the event of a major war. The point especially to be noted in this connection is that, except for certain specialty products in relatively small quantities from American refineries, the petroleum of the Western Hemisphere is not available for the supply of the growing demands of Western Europe.

The problem of oil supply to the free nations of Europe would be much less acute but for the fact that the area comprised by these states does not rank high in terms of oil production. Since the close of World War II Europe, outside of Soviet or Soviet-controlled territory, has never been able to supply from its own crude oil and liquid hydrocarbon sources more than 20 percent of its requirements, and the gap between indigenous oil production and current demands has been constantly widening. This means that, in spite of stepped-up synthetic production, Western Europe has had to import substantially all of the oil and oil products required for normal economic life plus a modest degree of rearmament.

The relative unavailability of American oil for the needs of Western Europe inevitably has placed the burden of supply on the Middle East. Transportation and price considerations also have favored European dependence on Persian Gulf oil, whether transported to the Mediterranean by pipeline or by tanker. Importation from the Middle East, particularly after the closing down of the great Abadan refinery late in 1951, was in terms of crude oil, for the most part. This necessitated a vast refinery building program, involving new plants in almost every sector of Western Europe. This has tended, naturally, to increase the interdependence of Europe and the Middle East producing areas. It is not to much to say that, since the strength of the Western European countries is essential to any plan of free world defense and since this strength depends in a large measure on adequate supplies of petroleum products, the Middle East is a prime factor in free world security.

There can be no doubt that oil in sufficient quantity for any need is present in the Middle East. Taken as a whole, this area possesses more than half of the known oil reserves of the world, amounting in 1953 to about 62 billion barrels. Here all of the circumstances which control the recovery of oil in significant quantities have combined to form phenomenally rich fields. Serious obstacles to production exist in the area, nevertheless. Those created by extensive deserts, great heat, rugged terrain, and long distances have been largely overcome. The greater hazard is found in the lack of enthusiasm of the proprietary states for western methods of exploitation and the consequent growth of sentiment for the nationalization of such resources and in the thinly veiled designs of the Soviet Union on the oil-producing countries.

It is clear that the countering of Soviet influence in the Middle East, especially in the oil-producing countries, and the continued orientation of these countries toward the West sufficiently at least to preserve favorable relationships with respect to foreign financial investment and trade is a major task of western diplomacy. It still remains to form a fair estimate of Soviet intentions as to Communist propaganda, subversion, or even outright aggression in the Middle East Oil areas. The character of these intentions undoubtedly depends to a consider-

able extent on the needs of the Soviet Union and its satellite states for petroleum, for while it would be greatly to the advantage of the Soviet Union simply to deny the use of Middle East oil by the free world, the political risks that Soviet leaders will be willing to take in attempting to frustrate the activities of capitalistic nations in this important area are certain to be related to the question as to whether the Soviet Union itself needs Middle East oil to supplement current production behind the Iron Curtain.

The precautions taken by Soviet authorities against prying eyes have been so elaborate as to restrict to broad generalizations any conclusions arrived at along this line. Such information as can be gathered will have been drawn from official published reports, previously calculated as to propaganda value, or will have been deduced from fragments of ascertainable fact. In either case, resulting data must be regarded with an open mind.

Owing to the style of life led by Soviet and satellite peoples, the quantities of petroleum products required in pursuance of the objectives of the Soviet Union are considerably smaller in proportion to total industrial output and size of populations than in most West European countries, and more especially, in the United States. Nevertheless, in consequence of the increased use of internal combustion and—in aviation—jet engines, the emphasis has been shifting since 1945. Road transport during the past 10 years has more than doubled. Automobiles have been multiplying, as have farm tractors, trucks, and harvesting combines. Diesel engines have become standard in railway transportation. Even so, the principal needs for oil derivatives emanate from the progressive mechanization of the military establishment.

The growing need for fuel oils appears to be reflected in the goal of the fourth 5-year plan. Whereas the third, which ended in 1950, fell somewhat below the target with a maximum annual production of 265 million barrels of crude, the aim for 1955 is an annual production of 450 million barrels. Considering the emphasis now being laid on deep drilling, improved production methods, and pipeline transportation from new and distant fields, this goal may be possible of achievement. It is not certain, however, that the advertised goal of the current 5-year plan, even as supplemented from satellite countries, represents the full extent of oil needs. That extent will be determined by Soviet political and military designs, probably including the plan of continuing to dump oil on the world market in barter agreements with the twofold object of accumulating foreign exchange and embarrassing the oil-trading western nations. The announced goal of the current 5-year plan thus cannot be accepted as a dependable indicator of the oil calculations of the Soviet Government.

There is little reason to suppose that the Soviet Union is deficient in petroleum resources. Nearly half of the subsurface ground structures in its entire Eurasian area consist of sedimentary rock formations where oil may occur. One authority on Russian resources thinks that the ultimate petroleum yield may be of the order of 168 billion barrels. Another estimate, taking into consideration natural-gas resources and inclusive of completely unproved regions in western and northeastern Siberia, suggests an ultimate potential of 195 billion barrels, twice that of the United States. These figures, of course, are largely guesses and may be greatly oversanguine. Nevertheless, more than 20 basins

favorable to oil production have been mapped. Some of the individual fields already developed within these basins are among the most productive in the world. Hence it cannot safely be assumed that within any brief period of time the Soviet Union is likely to lack oil reserves for its major purposes.

The disadvantages inherent in depending principally on production in the Caucasus region have stimulated the development of oil and gas fields on the western flank of the Urals, conveniently located with reference to the newer industrial areas. Between the Urals and the Volga is a large oil- and gas-producing region, more than two-thirds the size of Texas, called the second Baku. Between this region and the Caspian are the oil and gas fields of the Emba-Uralsk district, third largest in oil output. Other fields are being developed east of the Ural Mountains on the edge of the central Asian tableland and on the eastern shore of the Caspian Sea. Only a little less important is the output on the island of Sakhalin.

A complete survey of Soviet oil resources must include those of the satellite countries. The Rumanian fields and their refineries figure considerably in Soviet plans. For example, about 60 percent of the output of the Ploesti and Moldavia areas, which had a production in 1953 of about 33 million barrels, was then being taken by Soviet Russia as war reparations. Albania, the Soviet Zone of Austria, and Hungary each produce more oil than they consume. Czechoslovakia, Poland, and Bulgaria, however, have demands in excess of their own production. The Soviet Zone in Germany produces in coal hydrogenation plants most of the oil derivates required in that region. Within the bounds of the Iron Curtain, but beyond its own borders, the Soviet Union obtains an annual net of probably 15 million to 20 million barrels—a very useful amount.

The Soviet Union thus appears to possess and to control enough oil to implement its domestic and foreign policies. As these supplies of petroleum give physical strength to the Soviet regime, they could possibly contribute to the paralysis of free Europe if used to implement the interruption of the westward flow of Middle East oil.

APPENDIX

A NEW PROGRAM FOR THE SOVIET CONSUMER

Prepared in the European Division, Bureau Foreign Commerce, United States Department of Commerce, November 1953

The broad commitment which Premier Malenkov made on August 8, 1953, to improve the situation of the Soviet consumer "within 2 to 3 years" has been translated by decree into a detailed program for the future production of foodstuffs and other consumer goods. On October 28 and 30, the Moscow press carried the text of two lengthy directives containing 1954 and 1955 target figures for a number of mass consumption goods.

In form of presentation, the program embodied in the recent directives is in sharp contrast to the uncommunicative provisions on consumer goods of the original directives for the fifth 5-year plan, published in August 1952. Whereas the latter avoided quantitative goals altogether, and limited their coverage of consumer goods to 9 items, the recent directives spelling out the Malenkov program in this field cover a fairly broad range of goods and contain, moreover, specific production figures for 2 successive years.

As a statement of goals, the new directives are also more communicative on the subject of consumer goods than either the third or the fourth 5-year plans. For example, the fourth 5-year plan cited targets for only 8 types of consumer durable goods, and the third plan made no mention of such categories of goods. By contrast, the present target figures contain output goals for 18 types of durable household goods. In fact, output figures for such products as bicycles, watches, samovars, cameras, and phonographs have not been reported in Soviet publications since the middle thirties. The newer types of consumer durable goods, like refrigerators and washing machines, featured in small numbers in the present plans, are still evidently in the experimental stages of production in the U. S. S. R.

I. Some Foodstuffs To Be Double of 1950

The new directives divide the presentation of the program into two broad categories, foodstuffs and consumer industrial goods. With respect to foodstuffs, the information presented in the directives is relatively more complete. Specifically, all listed output targets in the foodstuffs category are linked, by percentage references, to actual 1950 levels of production. As a result, we obtain from the directives a fairly useful statistical summary of the output situation in foodstuffs for a recent year (1950), along with the schedule of future production:

Production of selected foodstuffs, 1950 and plan for 1955

	Unit	1950 (actual)	1955 (plan)	1955 as percent of 1950
Meat	Thousand metric tons	1,253	2,550	200
Sausage	do	483	850	176
Butter	do	319	560	176
Milk	do	1,150	2,750	240
Fish	do	1,745	3,190	183
Vegetable oils	do	778	1,500	192
Soap	do	800	1,200	150
Sugar	do	2,530	4,800	190
Canned goods	Millions	922	2,045	222
Cigarettes	Billions	125	215	170

The recently published statistical material thus reflects the existence of a fairly well established food-processing industry in the U. S. S. R. While the scale of production within this industry is shown to be quite large, its total physical output does not appear particularly impressive in terms of the consumption requirements of the vast population of the U. S. S. R. Thus, the meat output figure for 1950 points to an availability of about 9 kilograms (20 pounds) a year for each of Russia's 140 million nonfarm inhabitants during the year. The 1950 sugar output provided for a per capita consumption figure of 12.6 kilograms (28 pounds) of sugar. The annual supply of fats and oils appears to have been particularly small, 5 pounds of butter and 12 pounds of vegetable oil a year for each nonfarm inhabitant.

As far as distribution of basic foods is concerned, rural areas of the Soviet Union, which are served by an ill-equipped network of retail trade outlets, are at a considerable disadvantage in obtaining their share of the available supply of processed food products. This has been confirmed in the recent report by the minister of domestic trade, A. Mikoyan. Speaking before a conference of trade workers on October 17, 1953, Mikoyan called attention to the increase in the consumption of sugar by textile workers. Among these workers, he said, per capita consumption of sugar rose from 12.8 kilograms in 1909 to 31.2 in 1952. Before leaving this subject, however, he added a sobering comment to the effect that "some regions still do not have enough sugar."

In light of the past performance of the Soviet food industry, the published targets figures appear to be singularly optimistic. Roughly half of the listed items are scheduled to expand at a rate of some 10 percent each year, and the other half of the targets reflect expected increases of 20 percent and more per annum between 1950 and 1955. This buoyant optimism on the part of the Soviet planning authorities can only be explained on the assumption that it is based on the expectation that the decrees, published at the end of September, calling for better performance in all branches of farm work, will bring in their wake a marked improvement in the supply of the basic raw materials of the industry. It will be helpful to recall, however, that the report by Khrushchev which preceded the new decrees indicated quite forcefully that Soviet agriculture has made remarkably little progress since the beginning of collectivization 25 years ago. For example, the output of vegetable oils increased 20 percent between 1928 and 1950, while the population grew by one-third.

II. Program for Consumer Industrial Goods Given Without Perspective

A. CLOTHING AND FOOTWEAR

In contrast to the data on foodstuffs, the material on the production of textiles and shoes, presented in the recently published directives, contain no information on actual 1950 levels of output. It is impossible, therefore, to determine the degree of improvement which the Soviet consumer may expect in this group of commodities. There are available, however, some independently computed 1950 output figures in the case of several textile products and leather shoes. For these, the planned increases between 1950 and 1955 look as follows:

	Unit	1950 (actual)	1955 (plan)	1955 as percent of 1950
Cotton fabrics	Million meters	3,815	6,267	164
Wool fabrics	do	167	271	162
Silk and rayon fabrics	do	153	573	374
Hosiery	Million pair	475	777	161
Shoes	do	206	318	154

Of the above five consumer products, silk products stand out as a category singled out for an increase of nearly fourfold by 1955. This reflects the current effort being made by the Soviet Government to introduce into the country's textile industry new facilities for the production of artificial silk fabrics. The four other items in this group of consumer goods are scheduled to increase during the 1951–55 period at a rate of about 10 percent per year. In the textile section of the directives may be found, in addition, target figures for a number of finished articles of clothing, a category of products never before listed in Soviet production plans. Thus, in 1955, according to present plans, the Soviet Government undertakes to produce, among other things, 20 million overcoats, 16

million wool suits, 13 million dresses, and 382 million pieces of knitted underwear. In the absence of production figures for any recent year, there is no way of ascertaining whether or not these projected goals represent a substantial increase over previously achieved levels of output.

B. CONSUMER DURABLE GOODS

In the category of durable goods, the new directives promise the Soviet consumer the most spectacular increases within the next few years. There are several reasons for the special treatment of this category of goods. In the first place, Soviet industry is known to have in operation very few regular, mass facilities for the production of consumer durable goods. For example, the most publicized home refrigerator (ZIS) is produced in one of the shops of the Stalin Auto Works, reportedly on a custom-made basis. Furthermore, the social elite of the U. S. S. R., who enjoy the housing necessary for such appliances, has become strongly conscious of modern household aids. Evidently, the wide prevalence of such appliances abroad has become known to segments of the urban Soviet population despite the information policy of the Government.

In the case of several types of consumer durables, the recently published material has, by indirect reference, furnished some clues to current production levels. It is possible, for example, to compute 1953 output figures for the following types of household goods, although their scale of production is, by any standard, exceedingly low:

	Units
Refrigerators	62,000
Washing machines	27,000
Vacuum cleaners	48,300
	Metric tons
Aluminum holloware	40,000
Enameled holloware	20,500

In commenting on the palpably low output levels and targets in household appliances, Mikoyan, in the same address referred to above, expressed the hope that in this respect the Soviet citizen will show full confidence in the ability of his government to produce impressive results within a short period of time.

> "Some skeptics," he said, "especially among the ill-disposed, will say: here is something with which to startle the world. Certainly, we do not intend to startle anyone with our scale of production of washing machines, vacuum cleaners, or refrigerators. We have only just started this business. But the tempo at which we intend to advance this neglected area will, I expect, astound any skeptics."

It is worthy of note, however, that no production data on passenger automobiles, either actual or planned, are submitted in the recent directives. Passenger cars have been produced in the U. S. S. R. since 1924. But their level of output can be computed at 28,000 cars in 1950, with a target figure of 42,000 for 1955. It certainly could not be said of automobiles that their low volume of output in the U. S. S. R. today is either due to a lack of time or a lack of production experience.

A full list of the target figures for consumer durable goods, as cited in the directives, may be found in the appendix to this paper. In order to indicate the magnitude of increases planned for some items in this field, a selected few commodities are listed below, consisting of articles for which a 1950 level of output can be computed.

Production of some consumer durables, 1950 and plan for 1955

Commodity	1950	1955	1955 as percent of 1950
	Units	*Units*	
Bicycles	655,000	3,445,000	526
Watches	7,200,000	22,000,000	305
Radio receivers	1,080,000	3,767,000	348
Sewing machines	508,500	2,615,000	514
Electric ironers	486,000	4,375,000	900
Samovars	222,500	890,000	400
Kerosene burners	1,200,000	3,843,000	320
	Metric tons	*Metric tons*	
Alluminum holloware	36,000	107,000	300

Amount of investment involved

The two ministries principally concerned with the fulfillment of the expanded program of production are: the Ministry of the Food Industry and the Ministry of Industrial Consumer Goods. Each of these two agencies is instructed by the October directives to construct and recondition during the coming months a sizable number of new plants for the manufacture of the increased quantities of goods ordered by the Government. In order to carry out this program of construction and equipment, the two ministries have been promised an additional amount of investment capital, totaling 7.9 billion rubles in 1953 and 15.2 billion (including regional producers) in 1954. While it is impossible to ascertain how much new building and machinery these ruble sums can buy, it is possible to relate the supplementary funds for 1953 to the total figure for industrial investments allocated this year. Measured against this total of 82.6 billion rubles, the new investment funds amount to a diversion of 9.4 percent in favor of the consumer sector of industry.

From the point of view of production, we know that the consumer sector accounted for only 27.8 percent of total Soviet industrial output in 1952. Hence, a modest boost in investments, on the scale provided for in the present directives, is not likely to change materially the pattern of industrial output in U. S. S. R. This is a pattern in which heavy industry holds a position of preponderance, as reflected in a contribution of 72.2 percent of the total volume of production in 1952. At best, therefore, the increased attention to the consumer industries, in terms of investments, may initiate a trend to "trim" the share of heavy industry to less than 70 percent of the overall industrial products. From there, Soviet industry would still have a long way to go before returning to, say, the 1940 ratio between producer's and consumer goods, namely 61 to 39 percent.

According to the language of the new directives, the promised program of consumer goods production has become possible because "the Soviet Union at present possesses a powerful heavy industry which has assured a rapid development for the economy of our homeland." Total development, the Government statement declares, has now reached the stage where "roughly 70 percent of the output of industry consists of capital goods." Thus, the time is now ripe for increasing the rate of the "trickling down" process from heavy to light goods. In the words of the official communique: "An opportunity now exists for increasing substantially the allocation of investment capital into the branches of industry producing mass consumption goods."

The impression that the Malenkov program for the Soviet consumer is essentially a controlled and, quite modest, increase in the acceleration of the rate of activity in the nonstrategic sector of the economy, amplified by means of an optimistic presentation, is confirmed by still another comparison. This is a comparison of the extent of the upward revision of the original 1955 targets, presented in August 1952, with those contained in the new, October directives. Unfortunately, this comparison can be made for only nine products, i. e., the total number of consumer items included in the original version. These are as follows:

Targets for 1955, original and revised

	Unit	1955, original	Percent of 1950	1955, revised	Percent of 1950
Cotton fabrics	Million meters	6,142	161	6,267	164
Woolen fabrics	do	257.8	154	271	162
Shoes	Million pairs	318	155	318	155
Sugar	Thousand metric tons	4,503	178	4,800	190
Meat	do	2,448	192	2,550	200
Fish	do	2,757	158	3,190	183
Butter	do	550	172	560	176
Vegetable oils	do	1,377	177	1,500	192
Canned goods	Millions	1,936	210	2,045	227

The outlook for fulfillment

1. *Favorable factors.*—The principal factor at work in favor of a better supply of consumer goods in the U. S. S. R. is the decision of the Government, implied in the new directives, to loosen somewhat its traditional tight allocation of investments for light-industry expansion. By all indications, the state of heavy industry, as seen by the new leadership, is quite satisfactory, and the total productivity of industry is proceeding at the desired rate. From the same view-

point, therefore, even a modest diversion of resources from the former beneficiaries—basic materials, machinery, and armaments—to consumer goods can produce a marked betterment in the supply situation, as well as an improvement in morale, within a short span of time.

2. The present situation in regard to the materials going into consumer goods appears to be quite favorable for enabling Soviet industry to deliver on the new commitments of the Government. This is probably more to be expected in the case of products based on industrial materials, chiefly metals. It is interesting to note that nonferrous metals appear to be slated to play a bigger role in consumer-goods production. Evidently aluminum production has expanded to a point where the Soviet Government can promise the population 90,000 tons of aluminum hollowware in 1954 and 107,000 in 1955. This tonnage, as Mikoyan recently boasted, is greater than the total output of Soviet industry in 1937. All aluminum utensils, it should be noted, are scheduled to be produced by the Aviation Ministry.

Unfavorable factors.—1. In comparison with industrial consumer goods, foodstuffs appear to be less assured of an improved supply of raw materials. The record of Soviet agricultural output since the beginning of collectivization, as reviewed by Khrushchev last September, is not such as to lend strong credence to the expectation that between 1950 and 1955 such chronically short articles of food as meat, milk, cheese, sugar, canned goods, and vegetable oil will double in annual volume of production.

2. In the case of many consumer products of metal origin, the new directives provide for the continuation of a long-established Soviet practice of assigning the main quotas of production of such articles to heavy industrial plants, on a sideline basis. Past experience has shown abundantly, and reflected in detail in the official press, that such appended lines of productions are usually maintained on the basis of waste material, by the use of obsolete equipment and surplus labor.

3. There are, furthermore, some clues in the published directives indicating that some large-scale facilities for the production of the projected consumer durable goods may still be in the planning stages. This appears to be true in the case of washing machines. With reference to the latter, the instructions call upon two large ministries (aviation and electrical industries) "to organize the production of simply designed and low-cost washing machines (dry-wash contents 1.5 kilograms)."

4. Apart from the difficulties confronting the Soviet consumer-goods industry in terms of materials and physical facilities, there remain two more important retarding factors: (*a*) First, the attainment of good quality of product has been a difficulty with which Soviet industry has wrestled for many years. Even under conditions of severe underproduction, as Mikoyan reports, large quantities of goods remain on the shelves periodically for want of buyers, despite the standard practice of "tie-in sales" between the wholesale and retail channels. Should a greater abundance of goods develop, it may be assumed that additional marginal qualities of goods which are now considered acceptable by consumers will be rejected. (*b*) Second, the domestic trade network of the U. S. S. R., as described by Mikoyan, cannot in the near future be relied upon to raise its efficiency of operations in the acquisition of salable goods from industry and in the rational distribution of available supplies to all geographic regions and all segments of the population.

A program for the elite

By its emphasis and selection, the present program appears to be intended primarily for the satisfaction of the needs of the elite elements of the urban population of the U. S. S. R. The frequent references to foreign standards of quality would appear to be irrelevant as far as the bulk of the population is concerned. The fact that some basic metal goods, such as beds and utensils, are still planned at modest levels, while large quantities of metal are scheduled to be processed into such luxury items as vacuum cleaners and floor polishers also suggests a degree of demand on the part of the upper economic ranks that the Government cannot ignore. There are, furthermore, provisions in the present program for making available work brigades for the construction of *dachas* (summer homes), for a more abundant supply of wine, champagne, and liqueur, and for the extension of facilities for family dining and entertaining in restaurants.

Some implications of the program

Spectacular as it is made to appear, the proposed increases in the supply of goods for the Soviet consumer will not, in any way, change the nature of the

economy of the U. S. S. R. So long as the Soviet Government continues to hold a monopoly over all investment decisions, the state, and not the consumer, will be the controlling factor in determining the types and quantities of products to be turned out by the country's industry.

It is also quite certain that the present pricing system will remain unchanged in the U. S. S. R. Under the existing system, all consumer goods are subject to the "turnover" (excise) tax, ranging from 40 to 80 percent of the retail price, a tax that raises the bulk of the Government's revenue, approximately covering the cost of armaments and new economic investments. In an atmosphere of continuing high prices, the bulk of the consumers in the U. S. S. R. will probably have purchasing power sufficient only to buy the basic subsistence goods. The new, western articles of consumption will, by default, go to the better paid classes in Soviet society.

It is a matter of far-reaching significance, nevertheless, that in order to make its good intentions toward the consumer appear convincing the Malenkov government had to express its promise of an improved life in specific quantitative terms. In this sense, the latest target figures represent a firm commitment to the population of the kind the Stalin regime had in recent years consistently tried to avoid. The soviet population has apparently not accepted the blackout of information on living standards as justifiable on grounds of state security. Moreover, the model for the Malenkov reform appears to be the Western World, both in the readiness to face some of the hazards of information and in the promise of a higher standard of supply of modern necessities of daily life. In the future, the regime can thus be held accountable for delivering on a set of concrete promises. Should it fail to deliver, its relation with the mass of its subjects may be expected to become more complicated.

Production of foodstuffs, 1950 and plan for 1954–55

	Unit	1950 (actual)	1954 (plan)	1954 as percent of 1950	1955 (plan)	1955 as percent of 1950
Meat	1,000 metric tons	1,253	2,180	174	2,550	200
Sausage products	do	483	710	147	850	176
Butter	do	319	476	149	560	176
Cheese	do	48.5	97	200	135	280
Milk	do	1,150	2,300	200	2,750	240
Ice cream	do	95	190	200	240	250
Fish (catch)	do	1,745	2,715	156	3,190	183
Herring	do	245	520	210	670	280
Vegetable oils	do	778	1,300	167	1,500	192
Margarine	do	195	390	200	450	230
Soap (40 percent)	do	800	1,000	125	1,200	150
Sugar:						
Granulated	do	2,530	4,300	170	4,800	190
Cube	do	700	1,350	193	1,550	220
Macaroni products	do	436	872	200	1,030	280
Canned goods	Millions	922	1,780	193	2,045	222
Canned fruits	do	427	755	187	855	200
Beer	1,000,000 decaliters	130	210	163	232	181
Wine	1,000 decaliters	14,460	30,370	210	34,480	240
Champagne	do	1,057	1,370	129	1,480	140
Cigarettes	Billions	125	200	160	215	170

Production of textiles and footwear, 1950, and plan for 1954–55

Commodity	Unit	1950 (actual)	1954 (plan)	1955 (plan)
Cotton fabrics	Million meters	3,815	5,549	6,267
Wool fabrics	do	167.4	242	271
Silk fabrics	do	153.0	504	573
Linen fabrics	do		295	406
Shoes, leather	Million pairs	206.0	267	318
Shoes, rubber	do		104.6	109.4
Hosiery	do		673	777
Overcoats, wool	Thousands		15,000	20,000
Suits, wool	do		12,400	16,000
Suits, cotton	do		11,600	15,000
Trousers, wool	do		10,000	13,000
Trousers, cotton and linen	do		14,000	18,000
Dresses	do		10,300	13,000

Production of consumer durable goods, 1950 and plan for 1954–55

[Figures refer to number of units, except where otherwise indicated]

	1950	1954	1955
Motorcycles		190,000	225,000
Bicycles	655,000	2,510,000	3,445,000
Watches	7,200,000	16,800,000	22,000,000
Wrist watches		5,650,000	7,150,000
Radio receivers	[1] 1,080,000	2,861,000	3,767,000
Television sets		325,000	760,000
Washing machines		111,000	296,300
Refrigerators		207,000	330,000
Sewing machines	508,500	1,335,000	2,615,000
Electric irons	486,000	3,550,000	4,375,000
Samovars	222,500	675,000	890,000
Vacuum cleaners		243,000	483,000
Enameled holloware [2]		73,545	134,270
Kerosene burners	1,200,000	2,966,000	3,843,000
Aluminum holloware [2]	36,000	90,000	107,000
Metal beds		13,500,000	16,540,000
Furniture [3]		5,336	6,958
Cast iron utensils [2]	13,500	47,700	67,500
Galvanized utensils [2]	48,425	143,900	193,700
Phonographs		921,000	1,125,000
Cameras		765,000	1,000,000
Spoons, stainless steel	3,440,000	11,700,000	17,200,000

[1] Radio and television.
[2] Metric tons.
[3] Million rubles.

Soviet retail trade

[In billions of rubles at 1940 prices]

Year	Index		Reference data
1940	175.1		Lifits (1948 Monograph) p. 33.
1945	69.1		30 percent below 1946.
1946	89.8		17 percent below 1947.
1947	104.6	100.0	See note below.
1948	[1] 132.1		20 percent below 1949.
1949	[2] 158.5		30 percent below 1950.
1950	206.4		15 percent below 1951.
1951	237.5		10 percent below 1952.
1952	261.2		20 percent below 1953 (Mikoyan, Izvestia, Oct. 25).
1953	[2] 313.4		79 percent above 1940 (Mikoyan, Izvestia, Oct. 25).
1953 [4]	[3] 453.2	179.0	Combining 312+37.2+104.
1954	354.8		72 percent above 1950.
1955	412.8		Double of 1950.

[1] Checks with statement by Mikoyan (XIX Party Congress) that 1952 was double of 1948.
[2] Checks with statement by Mikoyan (Izvestia Oct. 25, 1953) that the 1953 annual rate is double of 1949.
[3] Annual rate based (presumably) on 9 months.
[4] In 1953 prices.

NOTE.—Basis for computation: Above series compiled on the basis of the 1953 annual rate figure given by Mikoyan (Izvestia, Oct. 25, 1953) as 179 percent of 1940 in comparable prices. The 1947 figure for which there is no given percentage, the figure of 102.1 billion was adjusted to 1953 prices (approximately double) and then to 1940 prices by using a factor of 144.3 percent, obtained as a ratio between 1940 and 1953 prices for 1953, namely, 313.4 and 453.2 billion rubles.

SOVIET INDUSTRIAL PRODUCTION, 1953

Prepared in the European Division, Bureau of Foreign Commerce, United States Department of Commerce, March 1954

SOVIET INDUSTRY IN 1953

During the year 1953 the industrial sector of the Soviet economy was again the chief beneficiary of all new investments allocated by the Government and, as a result, increased substantially its capital equipment as well as the volume of its annual output. The gross product turned out by Soviet industrial installations increased 12 percent in 1953, or approximately at the same rate as in the 2 preceding years.

A unique feature of the official economic report for 1953 was the stress laid on the improvement in consumer categories of industrial production. According to the report, the output for consumer products increased more in 1953 than in 1952, 12 percent as against 10.5 percent, respectively. During 1953, moreover, consumer goods production expanded 14 percent in the second half of the year, as compared with 10 percent during the first 6 months. Since the acceleration in consumer goods output began only in the second half of 1953, the preponderance of capital goods in the total volume of Soviet industrial production has not altered much by the end of the year.

This preponderance may be seen in the breakdown of the total output figures according to two major categories of industrial products, capital and consumer goods:

Soviet industrial output, 1940–53

[In billions of rubles at 1926-27 prices][1]

Year	Total output	Producers' goods	Consumers' goods	Consumer goods as percent of total output
1940	138.5	84.8	53.7	38.8
1950	239.6	173.6	66.0	27.5
1951	277.9	201.1	76.8	27.6
1952	308.5	222.6	85.9	27.8
1953	345.5	249.3	96.2	27.9

[1] 1951-1953 reportedly at 1950 prices.

The above figures are based on the official Soviet index of industrial production expressed in terms of 1926–27 prices. In the opinion of most serious students of the Soviet economy, this index suffers from a number of serious defects in valuation procedure which have introduced a marked upward bias in the officially reported figures on the value of annual industrial production in the U. S. S. R. The chief distortion in the official production measure has arisen from the practice of "pricing in" new products (especially machinery) into the index at current instead of constant prices during a period of general cost inflation in the Soviet economy. For the purpose of the current discussion, however, the data based on the official index are used neither to measure the total value of output nor to indicate the rate of growth of industrial output, but rather to indicate the relative magnitudes of annual changes in the level of industrial output and the relationship between capital and consumer goods in the annual product of Soviet industry.

HEAVY INDUSTRY

The primary branches of production that provide the basic industrial materials required by the fabricating plants of the U. S. S. R. made sizable gains during the year. Among the basic industries, cement increased 15 percent, electric power 13 percent, and crude oil 12 percent. Steel expanded by 10 percent, pig iron by 10 percent, and coal by 6 percent over the preceding year.

In general, the performance of primary branches of industry reflected the substantial input of capital equipment and labor provided by the Soviet Government to this high priority sector of production. According to the annual report, large quantities of newly designed equipment were allocated during the year for the mechanization of labor-consuming processes in the field of electric power, mining, and metallurgical production. In particular, the level of mechanization has reportedly been raised in the labor-intensive operations involved in the mining and preparation of ore for ferrous and nonferrous metals.

But even in these basic industries, according to the report, longstanding shortages have not been eliminated. Thus, the steel industry, for example, failed to meet the plan for turning out a number of specific products, including "certain deficit types of steel plate."

In the coal, steel, and other industries there were, according to the report, a considerable number of plants that failed to fulfill their assignments with regard to the so-called qualitative indexes of production. Because of the lagging plants, the steel industry as a whole failed to reach the planned norms for the utilization of blast and open-hearth furnaces. The oil industry failed to attain the planned average speed for exploratory drilling. For similar reasons, several ministries in the field of heavy industry, including metal and coal production, failed to reduce costs of production to the planned level. The annual plan for increasing labor productivity was not met, and the official rates of expenditure were exceeded generally in the case of raw materials, fuel, transportation, and administrative costs.

As a result of the steady, if uneven, expansion of productive facilities for the basic industries, the level of output in 1953 exceeded the 1940 level by considerable margins. As may be seen from the table below, the most conspicuous advance over 1940 was made in cement production. The most modest degree of expansion between 1940 and 1953 was recorded in the field of petroleum production.

Production of basic industrial items, 1940–53

	Unit	1940	1950	1951	1952	1953	1955 (plan)	1953 as percent of 1940
Electric power	Billion kilowatt-hours	48.2	90.1	102.7	116.1	131.2	162.0	272.2
Coal[1]	Million metric tons	166.0	260.6	281.5	301.2	319.3	375.0	192.4
Petroleum[2]	do	31.0	37.8	42.3	47.4	53.1	75.0	170.1
Pig iron	do	15.0	19.3	22.0	25.1	27.3	34.0	182.0
Steel	do	18.3	27.3	31.4	34.5	38.0	44.2	207.6
Cement	do	5.8	10.4	12.4	14.3	16.4	22.9	282.7

[1] Including lignite.
[2] Including crude oil equivalent of natural gas.

MACHINERY AND EQUIPMENT

The level of information on individual categories of machinery produced by Soviet industry has deteriorated in recent years. Until 1950, several prominent machinery items were cited regularly in the annual communique, in percentage terms, along with the usual small list of basic industrial materials and a number of consumer items. Beginning with 1951, however, the annual machinery series was broken by the omission of all percentage references to this category of goods.

At the same time, there was a certain amount of evidence to suggest that the level of production of the omitted machinery products was probably cut back by the Soviet Government as a measure to conserve resources for increased military production. Precisely how much it was cut back cannot, of course, be determined on the basis of data available at present. A rough indication of the retrenchment is suggested by the fluctuating levels in the delivery of equip-

ment made by the Soviet Government to agriculture since 1950. These were as follows:

Government deliveries to agriculture, 1949–53

	1949	1950	1951	1952	1953
Tractors (in terms of 15 horsepower units)	150,000	180,000	137,000	131,000	139,000
Combines (number)	29,000	46,000	53,000	41,000	41,000
Trucks (number)	64,000	82,000	59,000	57,000	69,000

The machine-building industry was reported to have incorporated during 1953 a number of new technological processes, especially in connection with its casting, forging, and assembly operations. In addition, plants producing machinery were reported to have received new consignments of more productive equipment, special machine tools, automatic and semiautomatic installations, as well as conveyor and automatic lines for the mechanical processing of parts and for the assembly of finished products.

All the same, the annual report leveled some sharp criticism against the machine-building industries. A large number of plants in these industries, according to the report, have consistently been meeting their monthly quotas of work at an uneven pace. Specifically, these plants have allowed their daily output to proceed during the early weeks of the month at a slow rate, making it necessary to shift into high, forced speeds of operations toward the end of the month. This situation has resulted in excessive, unplanned payments to labor for overtime work and above-quota performance. Moreover, the uneven flow of finished goods has caused considerable idleness of labor as well as machinery, a higher incidence of damaged goods, and a disruption of the shipping schedules to and from the plants.

The frequency with which the above complaint has occurred in recent official Soviet pronouncements suggests that the practice is probably in part the result of inefficiency and partly that of a tacit agreement between management and labor to use the device of unrhythmical work to raise the earnings of the factory workers and thereby reduce labor discontent and fluctuation. It is noteworthy that from the standpoint of efficiency the Soviet machinery industries have a relatively better record than the industries producing basic industrial materials or consumer goods. On the other hand, their completion of measurable production is such as to lend itself to monthly rather than daily quotas of output.

As in the past, the contribution of the machine-building industries to the total product of Soviet industry increased further during the year. In value terms, machinery output in 1953 accounted for 48 percent of total industrial production, as compared with 41 percent in 1950 and 31 percent in 1940.

Share of machinery output in total industrial production

[Billions of rubles at constant prices]

	Total output	Machinery output	Percent
1940	138.5	42.9	31
1950	240.0	98.7	41
1951	277.9	119.4	43
1952	308.5	138.2	44
1953	345.5	163.4	48

CONSUMER GOODS

As evidence of greater emphasis on consumer goods, the official report cites the following data: (1) Investments in the industries producing consumer goods increased 8 percent, as compared with a 4-percent increase in investments for the economy as a whole during the year. (2) Actual output of consumer goods expanded 10.5 percent in 1952, 10 percent during the first half of 1953, and 14 percent during the second half of last year.

The increases that reportedly took place during 1953 in the production of individual consumer commodities offer an interesting opportunity to compare

last year's levels of output with the known target figures for 1954. In the case of foodstuffs, this sort of comparison may be made for a fairly representative group of products. What emerges from such a comparison is clear evidence of a considerable gap that has to be filled in the course of the current year. Apparently, only 2 of the 11 food items listed in the table below (wine and cigarettes) will require less than a 10-percent increase to meet this year's target figure. The rest of the food products will require rather extraordinary increases in production, in the light of their past performance, to attain the goals planned for 1954. Butter, for example, will have to rise by 32 percent; canned goods, 29 percent; sugar and cheese, 25 percent; meat and milk, 21 percent; vegetable oils, 18 percent; fish, 15 percent, in one year.

Production of foodstuffs, 1950–54

Commodity	Unit	1950	1951	1952	1953	1954 (plan)	1954/1953
Meat	1,000 metric tons	1,253	1,403	1,613	1,806	2,180	121
Sausage	do	483	565			710	
Butter	do	319	338	351	361	476	132
Cheese	do	48.5	58.2	66.9	77.6	97	125
Milk	do	1,150	1,656	1,739	1,895	2,300	121
Ice cream	do	95				190	
Fish	do	1,740	2,123	2,300	2,369	2,715	114.6
Herring	do	247				520	
Vegetable oil	do	778	871	949	1,101	1,300	118
Margarine	do	195				390	
Soap (40 percent)	do	800				1,000	
Sugar:							
Granulated	do	2,530	2,985	3,074	3,443	4,300	125
Cubed	do	700				1,350	
Macaroni	do	436				872	
Canned goods	Millions	922	1,088	1,208	1,377	1,780	129
Beer	Million decaliters	130	151	160	181	210	116
Wine	Thousand decaliters.	14,460	17,930	22,950	28,458	30,370	106
Champagne	do	1,062	1,285			1,370	
Cigarettes	Billions	125	141	158	183	200	109

Very few products in the categories of wearing apparel have been reported regularly by the Soviet government during recent years. Such production figures as can be computed for items in this field point to a slow and irregular rate of improvement. Shoe production, for example, appears to have run up against certain production difficulties, chiefly in raw materials. This is suggested by the fact that the report for 1953 has replaced the usual percentage figure for total shoe output with a figure referring to the output of the plants subject to the jurisdiction of the Ministry of Consumer Goods. The volume of silk fabrics produced, on the other hand, expanded in 1953 alone by as much as 78 percent. Altogether, between 1950 and 1953 the increase in the production of silk fabrics, which include the rapidly expanding new lines of artificial silk, was approximately threefold, as compared with a 33-percent increase in cotton fabrics, the basic textile product of the U. S. S. R. The long-neglected wool industry turned out 222,700,000 meters in 1953, a volume lower than the output figure (270 million meters) originally planned for the end of the first 5-year plan (1932).

Production of textiles and footwear, 1950–54

	Unit	1950	1951	1952	1953	1954 (plan)	1954/1953
Cotton fabrics	Million meters	3,815	4,654	4,933	5,180	5,549	107.1
Wool fabrics	do	167.4	189.2	204.3	222.7	242	108.6
Silk and rayon fabrics	do	153	205.0	264.4	460.6	504	109.4
Shoes	Million pairs	206	241	246		267	
Hosiery	do	431.6	543.8			673	

Since the publication of the new program for expanding consumer-goods output in October 1953, a certain amount of information has been made available in the Soviet press on the level of production of consumer durable goods. Goods of

this category have hitherto been produced by Soviet industry in extremely low quantities. Correspondingly, the published percentage increases, both planned and achieved, have been running quite high. The volume of television sets produced in 1953, for example, was reportedly 125 percent larger than 1952, vacuum cleaners 100 percent above, refrigerators 59 percent, and radio receivers 27 percent.

The economic report for 1953, together with other data, make it possible to compute current levels of output for the following durable consumer items:

Production of durable consumer goods, 1950–54

	Unit	1950	1951	1952	1953	1954 plan	1954 / 1953
Bicycles	Number	655,000	1,165,900	1,667,237	1,917,323	2,510,000	130.9
Watches and clocks	do	7,200,000	9,144,000	9,966,960	12,159,691	16,800,000	138.2
Wrist watches	do					5,650,000	
Radio receivers	do	1,013,000	1,175,080	1,245,585	1,581,893	2,861,000	180.9
Television sets	do	67,000		54,200	122,000	325,000	266.4
Washing machines	do				27,000	111,000	411.1
Refrigerators	do				62,000	207,000	333.9
Sewing machines	do	508,500	676,305	811,566	1,006,342	1,335,000	132.7
Vacuum cleaners	do				48,300	243,000	503.1
Enameled utensils	Metric tons				20,500	73,545	358.8
Aluminum utensils	do	36,000			40,000	90,000	225.0

The low-priority status of consumer goods in the range of Soviet industrial production has been confirmed by a number of developments reported during 1953. It has been indicated, for example, that the bulk of the household appliances scheduled for output will be manufactured in existing heavy-industry plants as a supplementary line of production rather than in new factories of their own. With regard to consumer goods in general, the facilities of Soviet large-scale industry have never been adequate to meet the official plan. Accordingly, they have to be supplemented by the output of ill-equipped local plants and by that of numerous small producers' cooperatives. Owing to the dispersion of authority involved, the Soviet Government has found it especially difficult to maintain control over the quality of products entering the channels of domestic distribution. The 1953 report reveals the degree of official concern over quality in the following passage:

> "Many enterprises of the central ministries and in particular the producers' cooperatives and local industry, continue to turn out as part of their output, products of unsatisfactory quality, in an assortment not corresponding to the demand of the population; they have not taken all measures for improving the quality of the finish and appearance of goods. In particular, poor quality footwear, furniture, china and crockery, badly finished and unattractive fabrics, clothing and knitwear articles with serious defects continue to be turned out."

In the course of the year, a number of measures were introduced by the Soviet Government with a view toward improving the quality of consumer goods produced by industry. As a result of one of these measures, the wholesale organizations engaged in the distribution of industrial goods for consumers were transferred from the producing ministries to the Ministry of Domestic Trade. Another measure gave the trade network the right to refuse to accept from industry articles of substandard quality. In November 1953 the Soviet press reported that the Minister of Trade, working under new authority in this field, invoked sanctions against two plants which systematically produced defective rayon cloth. The Minister ordered the return of a large quantity of the defective cloth to the two plants and, at the same time, reduced his orders of new cloth drastically for the following 3-month period.

Industrial production in the U. S. S. R., 1950–53

Commodity	Unit	1950	1951	1952	1953
Primary industries:					
Coal, including lignite	Million metric tons	260.6	281.5	301.2	319.3
Petroleum, crude, including gas	do	37.8	42.3	47.4	53.1
Pig iron	do	19.3	22.0	25.1	27.3
Steel	do	27.3	31.4	34.5	38.0
Rolled steel	do	20.8	23.9	26.8	29.5
Manganese	do	3.4	4.2		
Electric power output	Billion kilowatt-hours	90.1	102.7	116.1	131.2
Cement	Million metric tons	10.4	12.4	14.3	16.4
Fertilizers	do	4.9	5.2	5.7	6.2
Machinery and equipment:					
Automotive vehicles	Thousand	397.3			
Trucks	do	369.2			
Passenger cars	do	28.1			
Tractors	do	107.3			
Combines, grain	do	46	53		
Machine tools	do	80	[1] 82.5		
Freight cars	do	117.2			
Steam turbines	1,000 kilowatts	2,444	2,688	2,903	4,064
Metallurgical equipment	1,000 metric tons	133.4			
Locomotives:					
Steam	Number	[2] 2,200			
Diesel	do	[2] 300			
Consumer goods:					
Fish (catch)	Thousand metric tons	1,740	2,123	2,300	2,369
Meat	do	1,265	1,417	1,630	1,806
Butter	do	319	338	351	361
Sugar, granulated	do	2,530	2,985	3,074	3,443
Soap	do	866.5			
Grain crop (before harvesting)	Million tons	124.5	121.3	131.0	130.0
Cotton fabrics	Million meters	3,815	4,654	4,933	5,180
Wool fabrics	do	167.4	189.2	204.3	222.7
Leather footwear	Million pairs	206	241	250	
Bicycles	Thousand	655	1,166	1,667	1,917
Watches and clocks	do	7,200	9,144	9,967	12,160
Radio receivers	do	1,013	1,175	1,246	1,582
Television sets	do	67		54	122
Washing machines	do				27
Refrigerators	do				62
Sewing machines	do	508	676	812	1,006
Vacuum cleaners	do				48

[1] Based on separately reported percentage increase of 165 over 1940.
[2] Planned figure.

INDUSTRIAL EXPANSION IN WESTERN AND EASTERN EUROPE DURING THE PAST 25 YEARS

(United States Information Service, European Service Center)

Summary.—This study of "the balance of industrial power in Europe" shows a shift in favor of Eastern Europe (Russia and current satellites) in the last quarter century. Its conclusion: While Western Europe still holds the lead it cannot afford complacency or industrial stagnation.

Biographical note.—Formerly Deputy Chief, Research Branch, in ECA and MSA Information in Europe, Mrs. Sivard entered Government service from Dun & Bradstreet, where she was associate editor of Dun's Review and head of business conditions analysis. She has served as an economist in international as well as United States Government agencies, spending 7 years since the war in France, Switzerland, and Austria. Her academic background includes a bachelor of arts from Smith College and a master of arts in economics from New York University.

This report is a partial summary of an extensive research project in which she is analyzing the comparative development of industry in the Communist and free worlds.

It is now 3 years since Western Europe as a whole has made any substantial progress in expanding industrial activity. What this means in terms of employment, the improvement of living standards, the future balance of trade with the rest of the world, has been clearly outlined by the Organization for European Economic Cooperation in its recent report, Progress and Problems of the European Economy. OEEC urges member governments to promote increased production as the main emphasis of national policy. The expansion of industry is the key to the economic health of Western Europe and the crucial problem of the

European economy at the moment. Only through increased industrial activity, OEEC points out, can Western Europe achieve a durable basis for internal prosperity.[1]

External comparisons further underline the vital importance of industrial progress and give sharp emphasis to OEEC's recommendations for expansion. While industry in Western Europe marks time, the industries of Russia and its satellites have pushed ahead vigorously. The industrialization of the eastern countries has already drastically altered the pattern of trade between the East and the West.

The relatively more rapid development of eastern industry is not a phenomenon only of the most recent postwar period but in Soviet Russia at least traces back to 1928, when the 5-year plans were inaugurated. To what extent is it changing the balance of industrial power in Europe? Is Western Europe losing her traditional position of leadership in the industrial sphere? Does her industrial machine have more, or less, to offer consumers—and how will it compare in the future?

These are questions of vital concern not only to Western Europe but to the whole world. On them will depend in large part the political strength of Western Europe and the psychological appeal of economic democracy. It is in the next quarter century that questions like these will become more and more insistent, and the answers clearer. As a basis for evaluating the future, we might at this time take a look at the present and at the changes that have taken place in the past quarter century in the European industrial scene.

What statistics can show us about the relative growth of industry in Eastern and Western Europe is now considerable, thanks to the excellent staff work of OEEC and of the United Nations' Economic Commission for Europe. There are not yet reliable indexes of total industrial production in Eastern Europe or Russia, but there are available figures measuring quantitative production (units, tons, kilowatts, etc.) of a large number of industries. Some of these can be related to comparable statistics for the prewar years which were compiled by the League of Nations.

In the charts and accompanying tables, production figures for 1952 have been compared with those for 1928 in a key set of industries, both for Western Europe (OEEC countries) and for Eastern Europe (satellites) and Russia. Some totals have been partially estimated by the writer; several for the satellite countries represent merely planned goals, and others are undoubtedly the result of more or less official guesswork perhaps somewhat slanted by the reporting officials for propaganda purposes. However, if allowance is made for some statistical error and the figures are considered as guideposts rather than as precise measuring rods, the results provide some instructive reading. They give a clear picture of the relative long-term changes in industry and of the contrast of the current situation in the East and West.

Though it contains some encouraging features, the total picture is not calculated to produce complacency in Western Europe. Judging from the comparative results of the past 25 years, these charts say Western Europe cannot afford further industrial stagnation.

For a quick review, the principal points revealed by the statistical comparisons are summarized below. First, let us look at those which are in Western Europe's favor:

GROSS OUTPUT STILL LARGER

1. In virtually all basic industrial products, Western Europe still outproduces the East including Russia by a substantial margin

The combined output of Russia and the satellites ranges from less than 50 percent of Western Europe's production of such producers' goods as zinc and cement to 75 percent of Western Europe's production of steel and coal. (Production of petroleum in the West including the overseas territories is, however,

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[1] OEEC's expansion program: In August 1951, OEEC set a tangible goal for Western Europe for 1955—in 5 years gross product was to be raised by 25 percent.

The objective, and arguments for it, are basically unchanged. So far, however, industrial activity has failed by a large margin to reach the rate of increase foreseen in the expansion program. In 1952 there was no net gain in production compared with 1951. In 1953 some improvement occurred in the latter part of the year, but the total increase for 1953 was under 5 percent.

In the report issued in January 1954, OEEC was not optimistic for the immediate future—unless positive policies are adopted. Appropriate measures differ from country to country. They include credit and tax policies directed at encouraging investment, other means of creating a favorable atmosphere for business enterprise and a "climate" of expansion.

only slightly above Eastern output. Production of copper is substantially less than in the East.)

INDUSTRY YIELDS MORE FOR THE CONSUMER

2. Per capita production of consumer goods is even more in the West's favor as a larger gross output is divided among a population 6 percent smaller than in Russia and the satellites

Not only is the present level of production favorable to the West but it is also maintaining its lead better than in the heavy industries. The relatively slower rate at which the Communists have expanded the consumer industries is evidence that the much-advertised "welfare" economics have not yet been geared to serve the population.

AGRICULTURE MORE ADVANCED

3. Mechanization of agriculture, as evidenced by production of farm tractors, has proceeded at a faster pace in the West

The breakneck pace of industrialization in Russia and the satellites has so far neglected agriculture as well as industrial consumer goods. This is demonstrated not only by production figures but also by Malenkov's own report on investments. Investment in agriculture and light industry from 1929 to 1952 totaled 166,000 million rubles, or only one-fifth of the investment in heavy industry and transportation.

For all of its talk of farm mechanization, Russia has only 1 tractor for 400 hectares of arable land, compared with 1 to 156 hectares in France. In most of the satellites the ratio is even lower: 1 to 620 hectares in Rumania, 1 to 764 in Poland, 1 to 860 in Bulgaria.

On the other hand, these factors are not in Western Europe's favor:

WEST'S INDUSTRIAL LEAD NARROWED

1. Over the past 25 years the East has greatly narrowed Western Europe's margin of industrial superiority

Of the 18 industries reviewed in this study, the East raised its volume of output relative to the West in all but 2 (petroleum production did not expand as fast as in the overseas territories of Western Europe, and tractor production also fell behind relatively). On the whole, the record of the past 25 years would seem to indicate that the Eastern countries have reduced by about one-half Western Europe's lead in heavy industries and by perhaps one-quarter its lead in consumer industries.

EAST HAS EMPHASIZED CAPITAL DEVELOPMENT

2. The East's relatively greater progress in production of heavy goods confirms its emphasis on expanding industrial capacity

Communist planning has not hesitated to squeeze consumers in order to enlarge capital production. That this has created an unbalanced industrial structure, by Western standards, is very evident. But so far dictatorship has not felt compelled to pay much more than lip service to consumers. Large promises and modest increases in supplies for the public may be the rule in the future as in the past. In that case, priorities will insure the further rapid development of the basic industries. Within the next quarter century, Eastern Europe in combination with Russia could thus exceed Western Europe's capacity to produce—for development or for war.

BUT EAST STRESSES PROGRESS FOR CONSUMERS

3. The expansion of consumer goods production in the East, even though small compared with heavy industry, gains significance by contrast to the past and to any evidence of relative stagnation in other countries

In the eastern countries, living standards have been so low that even small increases in supplies can be used to create an impression of significant progress. The Russian Communists have from the start recognized the value of the promise of a "golden future." In Western Europe, the total product for the consumer is still considerably larger, but it has changed relatively little in the past 25 years. In Eastern Europe it is small but it has increased relatively very much.

The significance of a feeling of progress should not be underestimated in appraising the morale of the public and its capacity for sacrifice.

Granted that the past is seldom to be taken as an infallible guide to the future, are there any conclusions to be drawn from this statistical review of the past 25 years?

It shows that Western Europe united is still stronger industrially than Russia in combination with her European satellites. The balance of industrial power still rests with Western Europe, whether that power is measured in present yields to the public or in capacity to expand.

But the trend is considerably less favorable than the static comparison. In the past 25 years the recognized superiority of the industrial West has been whittled down to a margin that could disappear entirely in the next 25 years. True, the East has sacrificed production for consumers in the race to develop its basic industries. It produces only a fraction of the necessities and comforts of life that are provided in the West. On the other hand, even this fraction is growing.

Faced with this challenge, how can the West afford industrial stagnation?

NOTES ON STATISTICS

References

Basic: OEEC General Statistics (bimonthly) and Basic Statistics of Industrial Production, United Nations Economic Survey of Europe in 1953 and six previous annual surveys, United Nations Statistical Yearbooks, League of Nations Statistical Yearbooks.

Other: ECE European Engineering Industry, European Tractor Industry, Economic Bulletin for Europe (quarterly), FAO European Timber Statistics, Textile Economics Bureau Textile Organon, Commodity Yearbook.

Territory (see country list under chart)

"Western Europe" represents OEEC member countries (including Turkey which is geographically in Asia, excluding Spain which is not a member of OEEC).

"Eastern Europe" represents Soviet Russia plus the satellites. Yugoslavia is not included.

For comparability, estimates for Eastern Germany are included in those for Eastern Europe in 1928 as well as in 1952. Similarly, only Western Germany shows in the totals of Western Europe in 1928 and 1952.

Area changes as a result of World War II (in square miles): Germany prewar was 182,500, postwar 143,200, of which 94,700 was Federal Republic. Excluding German changes, Western Europe net territorial change was minor; the satellites had a net loss of 54,000 square miles, Russia a net gain of 263,000. Consequently, the net effect of area changes on the rate of development is to reduce the production increase in the satellites between 1928 and 1952, and to enlarge increases for Russia.

Estimates where official figures were unavailable

1928 production for Eastern and Western Germany calculated from German total on basis proportion each area had of total production in immediate prewar period: Cotton fabrics converted from meters to tons for Russia, Hungary, and Bulgaria on basis 1 meter equals 120 gram weight; woolen fabrics converted from meters to tons for Russia, Hungary, and Bulgaria on basis 1 meter equals 455 gram weight.

Incomplete coverage

On several of the series, full coverage for the satellites is unobtainable at this time. It is unlikely that this affects the production total significantly in most cases. However, for the following products, the satellite total would be appreciably larger if 1928 and 1952 figures were available for all countries.

Cotton and woolen fabrics.—East Germany lacking. In 1952 it reportedly produced 119,000 tons of cotton, woolen and and other fabrics. No breakdown has been published.

Meat.—Bulgaria, Hungary, Rumania lacking. In the immediate prewar years they produced 670,000 tons, or one-fourth of the annual meat production of the area at that time.

Butter.—Albania, Bulgaria, Hungary, Rumania, and Poland missing. These countries produced 156,000 tons prewar or half the area total at that time. However, the bulk of this was in Poland where production is reportedly now much below prewar.

The balance of industrial power—Western versus Eastern Europe

	1928					1952				
	Western Europe	Russia	Satellites	Total, Eastern Europe	Percent Eastern Europe of Western Europe	Western Europe	Russia	Satellites	Total, Eastern Europe	Percent Eastern Europe of Western Europe
HEAVY GOODS										
Iron ore (million metric tons)	86.6	6.0	3.1	9.1	10	101.9	51.0	5.0	56.0	55
Steel (do)	42.2	4.3	5.2	9.5	23	61.8	34.5	11.5	46.0	74
Cement (do)	23.7	1.9	4.7	6.6	28	53.7	14.1	9.9	24.0	45
Coal (do)	466.3	34.0	93.0	127.0	27	473.8	241.0	115.0	356.0	75
Electric power (billion kilowatts)	84.2	5.0	17.7	22.7	27	292.1	117.0	54.9	171.9	59
Petroleum [1] (million metric tons)	2.1	12.3	5.0	17.3	824	57.2	47.4	8.7	56.1	98
Copper (thousand metric tons)	60	19	20	39	65	90	334	38	372	413
Aluminum (do)	110	0.3	0.1	0.4	0.4	412	225	31	256	62
Zinc (do)	466	2	174	176	38	607	148	93	241	40
CONSUMER GOODS										
Rayon yarn (thousand metric tons)	97	0.3	10	10	10	243	27	38	65	27
Cotton fabrics [2] (do)	1,028	419	154	573	56	1,014	592	223	815	80
Woolen fabrics [2] (do)	376	52	65	117	31	364	93	79	172	47
Shoes (million pairs)	433	164	78	242	56	428	270	117	387	90
Motor vehicle (thousands)	587	12	46	58	10	1,817	450	85	535	29
Tractors (do)	6	3	1	4	66	263	90	35	125	48
Meat [2] (million metric tons)	9.5	3.3	2.2	5.5	58	10.2	5.0	3.0	8.0	78
Butter (thousand metric tons)	875	112	76	188	21	1,063	352	119	471	44
Paper (million metric tons)	7.2	0.5	1.8	2.3	32	9.0	1.7	1.6	3.3	37

[1] Western Europe including overseas territories.
[2] 1938 in place of 1928, for which comparative figures are not available.

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TABLE I.—*The growth of National Products in the West, 1938–53*

[Index: 1948=100]

Country and year of price level	Gross national products in constant national currency								
	1938	1946	1948	1949	1950	1951	1952	1953	1953/1938
I. NATO countries:									
Iceland (1948?)	.....	(110)	100	95	94	93	96	[1] 108	.....
Norway (1938)	79	85	100	106	115	116	117	[1] 120	1.52
Denmark (1935)/(1949)	(87)	(95)	[2] 100	105	114	114	115	121	(1.4)
West Germany [3] (1936)	[4] 115	.....	[4] 100	114	135	159	169	[1] 178	[4] 1.55
Luxembourg (1950)	.....	.....	[5] 100	92	95	112	117	[1] 102	.....
Belgium (1950)	(91)	.....	100	104	120	118	116	119	(1.3)
Netherlands (1925/34)	87	79	100	107	110	111	114	[10](119)	(1.4)
United Kingdom [7]:									
(1948)	84	98	100	102	105	110	110	[1](116)	(1.4)
Ireland:									
(1938)	.....	.....	100	105	105	106	[1] (111)	[1] (115)	.....
(1938)	[9] (89)	.....	[9] (100)	[9] (104)	[9] (108)	[9] (109)	[9] (105)	.....	(1.2)
France (1938)	(93)	(85)	100	111	120	125	126	124	1.33
Italy (1950)	121	.....	100	105	115	125	129	133	1.10
Greece (1938) (1951)	(139)	.....	[2] 100	120	124	133	131	147	(1.1)
Turkey (1948?)	(84)	.....	(100)	(84)	(105)	(123)	(133)	(141)	(1.7)
Portugal (?)	(90)	.....	(100)	(101)	(114)	(125)	(124)	(129)	(1.4)
United States (1939)	58	96	100	101	108	116	119	127	2.19
Canada (1935/39)	56	96	100	105	109	115	122	127	2.27
II. Other countries:									
Finland [10] (1938)/(1948)	(90)	(88)	[2] 100	105	111	122	120	.....	(1.3)
Sweden (1949)/(1951)	78	94	100	[2] 107	114	114	115	116	1.48
Switzerland (1938)	83	88	100	100	106	110	.....	.....	(1.4)
Austria (1937)/(1951)	[11] (114)	.....	[2] (100)	121	136	147	147	147	[11] 1.29
Spain (1929?)	[12] (100)	.....	(100)	(97)	(106)	(127)	(144)	(141)	[12](1.4)

NOTE.—General: Approximate and possibly incomparable data are in parentheses.

[1] Preliminary.
[2] Marks a statistical break, with a new price system being used.
[3] Occupied by NATO forces.
[4] 1936.
[5] 2d half of 1948.
[6] Data based on 1952 to 1953 rise in constant prices of an unknown year, not 1925–34.
[7] Gross domestic product.
[8] Estimated from 1952–53 national product data at current prices (Fin. Sec. Treas., 1954: 4) and wholesale and retail price indices (London Times 1954, xiv).
[9] Expenditure of personal income (excluding taxes).
[10] Net domestic product.
[11] 1937.
[12] 1935.

Sources:
Iceland: OEEC, 1954: 283; Wander, 1950: 21, 27
Norway: OEEC, 1954: 283; Statistisk Sentralbyrå, 1952: 29
Denmark: R. Danish Min. For. Aff., 1954: 81; Statistiske Departement, 1951: 102–3
West Germany: OEEC, 1954: 283; INSEE, 1952a: 80–81
Luxembourg: OEEC, 1954: 283
Belgium: OEEC, 1954: 283
Netherlands: UN ST/STAT/Ser. H/5, Feb. 1954: 17
United Kingdom: OEEC, 1954: 283; UN ST/STAT/Ser. H/5, Feb. 1954: 19
Ireland: OEEC, 1954: 283; Central Statistics Office, 1954: 215
France: OEEC, 1954: 283; ECA, 1951A
Italy: OEEC, 1954: 283; INSEE, 1952a: 60ff
Greece: OEEC, 1954: 283; INSEE, 1952b: 231
Turkey: Information from FOA
Portugal: Information from FOA
United States: OEEC, 1954: 283; UN ST/STAT/Ser. H/5, Feb. 1954: 20
Canada: OEEC, 1954: 283; UN ST/STAT/Ser. H/5, Feb. 1954: 15
Finland: UN ST/STAT/Ser. H/5, Feb. 1954: 16
Sweden: OEEC, 1954: 283; ECA, 1951a
Switzerland: UN ST/STAT/Ser. H/5, Feb. 1954: 19
Austria: OEEC, 1954: 283; ECA, 1951a
Spain: Information from FOA; INSEE, 1952a: 151

TABLE II.—*National income and productivity trends, 1913–47, after Colin Clark* [1]

Factor	Norway [2]	Denmark [2]	Germany	Belgium	Netherlands [2]	United Kingdom [3]	France	Italy	United States	Canada
National income in billion international units:										
1. Pre-World War I (1913)	0.582	[4] 0.987	[4] 19.16	2.236	2.114	18.67	[5] 10.91	[4] 5.64	[6] 53.8	[10] 3.95
2. Early Postwar (2 years after end of hostilities)	0.832			1.628	2.333		10.91		59.9	3.64
Change from 1 (percent)	+43			−27	+10		0		+11	−8
3. Late Postwar (7 years after end of hostilities)	0.627	1.252	17.88	1.960	2.671	20.55	14.15	5.70	75.4	4.71
Change from 2 (percent)	−25			+20	+14		+30		+26	+29
Change from 1 (percent)	+8	+27	−7	−12	+26	+10	+30	+1	+40	+19
4. Pre-World War II (1938)	0.934	1.753	[7] 28.7	2.856	3.256	27.55	12.38	6.89	89.3	6.26
Change from 3 (percent)	+49	+40	[8] (+71)	+46	+22	+34	−13	+21	+18	+33
Change from 1 (percent)	+60	+78	[8] (+59)	+28	+54	+48	+13	+21	+66	+58
5. Early Postwar (1947)	1.175	1.886		2.966		30.14		5.23	152.7	11.05
Change from 4 (percent)	+26	+8		+4		+9		−24	+71	+77
International units produced per hour worked:										
1. Pre-World War I (1913)	0.209	0.300	0.319	0.222	0.286	0.366	[5] 0.207	0.134	0.549	0.512
2. Early Postwar (2 years after end of hostilities)	0.326			0.212	0.356		0.244		0.610	0.414
Change from 1 (percent)	+56			−5	+24		+18		+11	−19
3. Late Postwar (7 years after end of hostilities)	0.243	0.353	0.274	0.225	0.377	0.482	0.319	0.149	0.749	0.543
Change from 2 (percent)	−25			+6	+6		+31		+23	+31
Change from 1 (percent)	+16	+18	−14	+1	+32	+32	+54	+12	+36	+6
4. Pre-World War II (1938)	0.365	0.394	[7] 0.459	0.325	0.445	0.573	0.362	0.204	1.011	0.697
Change from 3 (percent)	+50	+12	[8] (+79)	+44	+18	+19	+13	+37	+35	+28
Change from 1 (percent)	+75	+31	[8] (+44)	+42	[9] +56	+57	+75	+52	+84	+36
5. Early Postwar (1947)	0.372	0.330		0.316		0.588		0.142	1.186	0.964
Change from 4 (percent)	+2	−16		−3		+3		−30	+17	+38

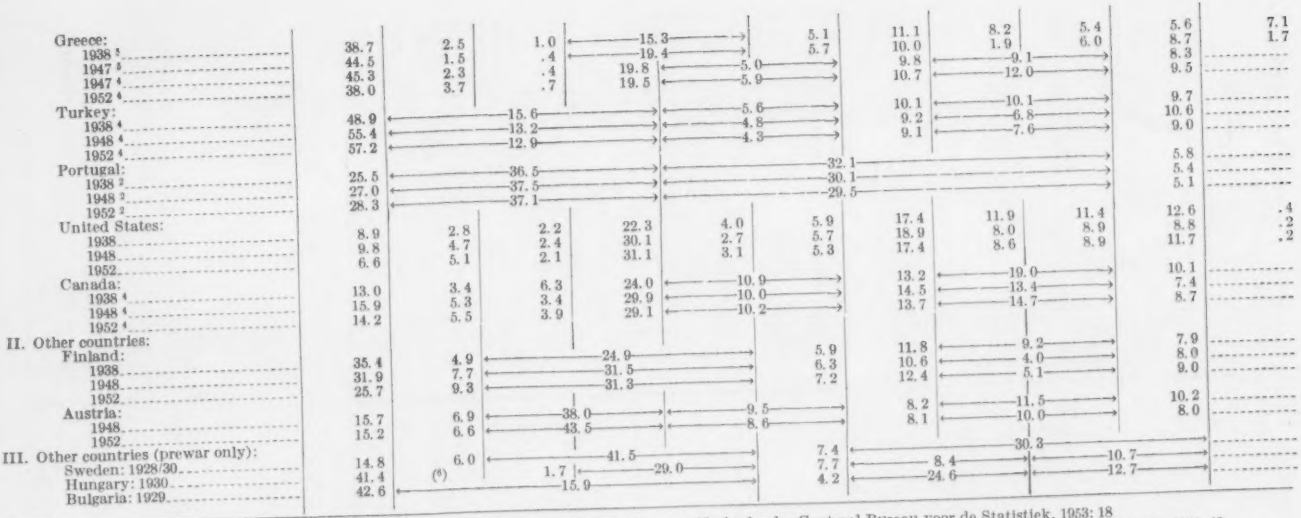
TABLE II.—*National income and productivity trends, 1913–47, after Colin Clark* [1]—Continued

Factor	Finland	Sweden [2]	Switzerland [3]	Yugoslavia	Czechoslovakia	Hungary	U. S. S. R. [9]
National income in billion international units:							
1. Pre-World War I (1913)	0.570		1.087	1.52	3.0		22.3
2. Early postwar (2 years after end of hostilities)							
Change from 1 (percent)							[11] 24.6
3. Late postwar (7 years after end of hostilities)	0.654		1.399	1.48	3.4	1.118	
Change from 2 (percent)	+15		+29	−3	+13		+10
Change from 1 (percent)	1.090		1.626	1.45	[6] 3.14	1.243	[6] 35.3
4. Pre-World War II (1938)	+67		+17	−2	−8	+11[4]	[12] (+56)
Change from 3 (percent)	+91		+50	−5	+5		[12] (+73)
Change from 1 (percent)					2.76		
5. Early postwar (1947)					−12		
Change from 4 (percent)							
International units produced per hour worked:	0.192	0.226	0.225	(0.126)	0.19	0.141	0.260
1. Pre-World War I (1913)							
2. Early postwar (2 years after end of hostilities)	0.231	0.302	0.309	(0.145)	0.24	0.162	[11] 0.355
Change from 1 (percent)	+20	+34	+37	+15	+26	+15	+37
3. Late postwar (7 years after end of hostilities)	0.327	0.398	0.364	(0.122)	0.22	0.165	0.314
Change from 2 (percent)	+42	+32	+18	−16	−8	+2	−12
Change from 1 (percent)	+70	+76	+62	−3	+16	+17	+21
4. Pre-World War II (1938)		0.406			0.18		
Change from 3 (percent)		+2			−18		
Change from 1 (percent)							
5. Early postwar (1947)							
Change from 4 (percent)							

[1] Clark (1951). In international units (United States 1925–34 dollars), including the value of imputed rents.
[2] Nonbelligerents in World War I.
[3] Excludes Eire.
[4] Post-World War I boundaries.
[5] 1911; excludes Alsace-Lorraine.
[6] 1937.
[7] For 1936.
[8] Projection to 1938 of the 1925–36 arithmetic-average rate.
[9] Data from an unpublished draft of the third edition of Conditions of Economic Progress.
[10] Projection to 1938 of the 1925–37 arithmetic-average rate.
[11] 1928. Note that the civil war in the U. S. S. R. did not end until 1921.
[12] Backward projection to 1925 of the 1928–38 arithmetic-average rate.

TABLE III.—*National income (net national products at factor cost) by industrial origin in the West, 1938–52*

Country and years	Percentage of national income at current factor costs										
	Agriculture, fishing, and forestry	Construction	Mining	Manufacturing	Public utilities	Transportation	Wholesale and retail trade	Finance, insurance and real estate	Other private services	Government services and defense	Net income from abroad
I. NATO countries:											
Iceland: 1948	36.9	14.8	0	← 12.3 →		← 25.4 →		← 10.7 →			
Norway:											
1938 [1]	14.7	6.5	1.3	23.7	← 15.5 →		14.6	← 21.8 →		1.9	
1948 [1]	16.5	8.4	1.0	32.2	← 13.2 →		11.5	← 14.0 →		3.2	
1952 [1]	14.8	8.2	1.5	31.2	← 15.8 →		12.5	← 12.5 →		3.5	
Denmark:											
1938 [2]	22.3	4.7	.1	28.2	← 8.8 →		15.6	← 13.3 →		7.0	
1948 [2]	20.8	5.1	.9	29.2	← 8.8 →		14.7	← 12.3 →		8.1	
1952 [2]	22.0	6.4	.4	27.7	← 10.0 →		14.5	← 10.9 →		8.1	
West Germany [3]:											
1936	13.4	5.4	← 44.0 →			8.5	9.5	← 9.5 →		9.7	
1949	12.0	6.0	← 43.7 →			9.3	10.0	← 9.8 →		9.2	
1952	12.2	6.3	← 48.8 →			7.8	8.8	← 7.6 →		8.4	
Belgium:											
1948 [2]	9.2	4.5	5.7	34.7	← 8.2 →		9.7	← 19.2 →		8.7	
1951 [2]	8.4	4.6	5.3	33.9	← 9.1 →		9.6	← 19.1 →		10.0	
Netherlands:											
1938	7.0	4.3	1.7	22.0	2.5	8.4	12.5	15.0	10.6	7.8	8.2
1948	11.9	5.2	1.6	30.6	1.1	7.9	14.6	6.9	7.7	10.4	2.0
1950	14.0	5.1	1.9	32.4	1.1	6.4	15.7	6.5	6.0	9.0	1.8
United Kingdom:											
1930	3.8	2.7	3.8	33.0	← 56.7 →						
1948 [2]	6.1	6.4	3.7	35.7	← 10.1 →		13.6	← 17.9 →		6.6	
1952 [2]	5.6	6.5	3.7	35.8	← 10.9 →		12.3	← 18.5 →		6.6	
Ireland:											
1938	23.5	← 61.3 →								7.4	7.8
1948	30.2	← 21.0 →			← 16.9 →			← 16.9 →		7.5	7.6
1952	30.3	← 22.9 →			← 16.3 →			← 15.8 →		8.4	6.4
France:											
1938 [1]	21.8	4.7	← 30.7 →			7.3	14.5	5.3	7.3	8.4	
1948 [1]	17.0	6.5	← 31.4 →			9.7	12.2	4.9	6.8	11.6	
Italy:											
1938 [4]	28.1	2.2	.7	25.2	← 7.4 →		10.4	← 14.1 →		11.9	
1948 [4]	35.8	2.5	.5	28.1	← 7.3 →		10.4	← 7.2 →		8.2	
1952 [4]	25.9	4.6	.9	31.1	← 8.1 →		(10.2)	← 8.6 →		10.7	



[1] Net domestic product at 1938 market prices; includes the rents of nonresidential buildings only.
[2] Gross domestic product at factor cost.
[3] Occupied by NATO forces.
[4] Net domestic product.
[5] Handicrafts, revenues of state enterprises and communications are grouped with manufacturing; transportation includes animal transport; net income from abroad includes marine shipping profits.
[6] Included with manufacturing.

Sources:
Iceland: ECA, 1951e
Norway: UN ST/STAT/Ser. H/5, Feb. 1954: 37
Denmark: UN ST/STAT/Ser. H/5, Feb. 1954: 29
West Germany: UN ST/STAT/Ser. H/5, Feb. 1954: 31
Belgium: UN ST/STAT/Ser. H/5, Feb. 1954: 26
Netherlands: Centraal Bureau voor de Statistiek, 1953: 18
United Kingdom: Clark, 1951: 443; UN ST/STAT/Ser. H/5, Feb. 1954: 42
Ireland: Central Statistics Office, 1954: 213
France: ECA, 1951a
Italy: UN ST/STAT/Ser. H/5, Feb. 1954: 34
Greece: INSEE, 1952b: 234–5; UN ST/STAT/Ser. H/5, Feb. 1954: 32
Turkey: UN ST/STAT/Ser. H/5, Feb. 1954: 41
Portugal: UN ST/STAT/Ser. H/5, Feb. 1954: 39
United States: Net. Ind. Conf. Bd., 1953: 740
Canada: UN ST/STAT/Ser. H/5, Feb. 1954: 27
Finland: UN ST/STAT/Ser. H/5, Feb. 1954: 30
Austria: UN ST/STAT/Ser. H/5, Feb. 1954: 26
Sweden: Clark, 1951: 446
Hungary: Clark, 1951: 447
Bulgaria: Clark, 1951: 449

TABLE IV.—*Shares of domestic income generated per employed person, by industry, for selected Western countries*

Country and year	Factor	Percentage of national total				
		Agriculture, fishing, and forestry	Manufacturing, mining, and utilities	Construction	Transportation, communication, and trade	Other (services, defense) [1]
Iceland:						
1949	National income [1]	37.5	←28.3→		22.5	11.7
1950	Labor force	37.6	←(27.0)→		←(35.4)→	
	NI/LF×100	100.0	←(105.0)→		←(97.0)→	
Norway:						
1948	National income [2]	16.7	(36.5)	8.5	(10.3)	27.9
Winter 1948–49	Labor force	33.3	24.0	7.2	8.3	27.1
	NI/LF×100	50.0	(152.0)	118.0	(124.0)	103.0
Denmark:						
1950	National income [1 3]	22.3	←(40.6)→		22.2	14.9
1950	Labor force	32.6	←32.9→		20.0	14.4
	NI/LF×100	68.0	←(123.0)→		111.0	103.0
West Germany:						
1950	National income [1]	12.6	(48.0)	6.3	(17.4)	15.7
1950	Labor Force [5]	16.0	(40.0)	12.0	←(32.0)→	
	NI/LF×100	79.0	(120.0)	53.0	←(104.0)→	
Netherlands:						
1947	National income [1]	12.6	35.0	5.6	23.9	22.9
1947	Labor force	19.9	(29.2)	(7.7)	21.9	21.2
	NI/LF×100	63.0	(120.0)	(73.0)	109.0	108.0
United Kingdom:						
1948	National income [1]	6.2	43.2	6.5	21.4	22.6
1948	Labor Force [6]	5.2	41.5	6.4	19.0	27.9
	NI/LF×100	119.0	104.0	102.0	113.0	81.0
1952	National income [1]	5.8	42.7	6.7	21.6	23.3
1952	Labor force [6]	4.8	42.9	6.2	19.0	27.0
	NI/LF×100	121.0	100.0	108.0	114.0	86.0
Ireland:						
1946	National income [1]	35.3	←20.1→		22.3	22.3
1946	Labor force	46.8	12.8	4.2	13.8	22.4
	NI/LF×100	75	←118→		162	100
Italy:						
1951	National income [1]	27.5	37.3	3.3	14.8	17.1
1951	Labor force	41.4	23.2	2.8	10.1	22.5
	NI/LF×100	66	161	118	147	76
Greece:						
1951	National income [1]	38.7	21.4	3.9	[7] 17.5	18.5
1951	Labor force	55.3	14.0	2.5	←[7] 28.3→	
	NI/LF×100	70	153	156	←[7] 127→	
Austria:						
1951	National income [1]	14.8	43.4	7.1	16.7	17.9
1951	Labor force	31.6	←40.3→		13.3	14.8
	NI/LF×100	47	←125→		126	121
United States:						
1950	National income [1]	7.7	36.9	5.5	26.3	23.5
1950	Labor force	12.3	28.6	6.0	24.8	282
	NI/LF×100	63	129	92	106	83

[1] Domestic income excluding rentals.
[2] Net domestic product at market prices.
[3] Gross domestic product at factor cost.
[4] Includes handicrafts.
[5] Males only.
[6] Total civil and military employment.
[7] Includes utilities.

Sources:

Iceland: ECA, 1951a; ECA 1951b.
Norway: UN ST/STAT/Ser. H/5, Feb. 1954:37: ECA, 1951c.
Denmark: Royal Danish Min. For. Aff., 1954:78; UN ST/STAT/Ser. H/5, Feb. 1954:29: Royal Danish Min. For. Aff., 1954:65.
West Germany: UN ST/STAT/Ser. H/5, Feb. 1954:29: UN E/ECE/174, Feb. 1954:81.
Netherlands: Centraal Bureau voor de Statistiek, 1953:18: Pfeiffer, 1950:73–74.
United Kingdom: UN ST/STAT/Ser. H/5, Feb. 1954:42: Central Office of Information, 1953:215–16.
UN ST/STAT/Ser. H/5, Feb. 1954:42: Central Office of Information, 1953:215–16.
Ireland: Central Statistics Office, 1954: 213: Central Statistics Office, 1954: 41–45.
Italy: UN ST/STAT/Ser. H/5, Feb. 1954: 34: Unione Italiana Cam. Com., Ind. e Agric., 1953: 34ff.
Greece: UN ST/STAT/Ser. H/5, Feb. 1954: 32: UN E/ECE/174, Feb. 1954: 81.
Austria: UN ST/STAT/Ser. H/5, Feb. 1954: 26: INSEE, 1952c: 50.
United States: Bureau of the Census, 1953: 283: Bureau of the Census, 1953: 186, 210.

TABLE V.—*Shares of domestic income generated per employed person, by industry, before World War II*

Industry	Norway, 1890	Germany, 1928	United Kingdom		Ireland, 1935–36	France, 1936–38	Italy		Greece, 1928–29 [1]	United States			Canada		Sweden			Yugoslavia, 1938	Hungary, 1929–36
			1911	1930			1928–31	1936–38		1919–21	1929–31	1937–38	1919–28	1929–38	1899–1901	1909–11	1928–30		
1. Agriculture, forestry and fishing	0.82 [2](1.53)	0.75 [2](.94)	0.85	0.62	0.72	0.93 [2](1.08)	0.88 [2](1.31)	0.89 [2](1.06)	0.96	0.51 [2](.63)	0.41 [2](.54)	0.48 [2](.63)	0.70 [2](.83)	0.47 [2](.55)	0.70 [2](1.26)	0.64 [2](1.00)	0.48 [2](.72)	0.51 [2](.56)	0.86
2. Mining	.74	1.19	.77	.68	1.70	.97	[3] 4.66		[3] .69	1.19	.76	.95	1.32	1.92	1.48	1.31	1.45	1.26	1.54
3. Manufacture		.78	.81	1.02						1.04	1.04	1.00	1.10	1.26					1.06
4. Construction		1.03	.79	.53		1.11	1.20	1.02		.65	.75	.61	1.09	.88			.92		
5. Transport and communications	1.22	1.36	[4] 1.61	[4] 1.40	1.25	[4] 1.48	.95			1.40	1.32	1.24	1.32	1.43	1.29	1.05	1.01	4.63	2.20
6. Commerce and finance	2.25		1.19	1.21		[5] 1.02 [6] 1.54	1.00	.80	1.32	1.17	.98	.90	1.25	1.22	1.00	1.22	1.12		1.20
7. Other services	1.39					.77	.90	1.43	[1] 1.86	1.48	1.63	1.51	1.13	1.33				2.47	.84

[1] Excludes domestic service.
[2] Agricultural income including income in kind.
[3] 4.66 for mining only.
[4] Railways.
[5] Commerce.
[6] Finance.

NOTE.—Rentals are excluded from the incomes generated. After Colin Clark, 1951.

TABLE VI.—*Gross national products in western countries, by end-use, 1938–52*

Country and years	Percentage of gross national products at current market prices					
	Private consumption	Government consumption		Investment		Net exports
		Total	Defense	Gross fixed capital formation	Inventories	
I. NATO countries:						
Norway:						
1938	67.0	10.0	1.0	21.0		1.0
1948	63.0	12.0	2.0	32.0		−6.0
1952–53 [1]	61.8	13.2	3.7	29.3		−4.0
Denmark:						
1938	75.1	9.4	1.0	13.7		1.7
1948	75.0	11.0	2.0	15.0		−1.0
1952	70.0	12.0	3.0	17.0		1.0
West Germany: [2]						
1936	60.0	20.2	[3]	14.7	4.4	.6
1949	65.1	17.7	[4] 5.4	18.9	1.6	−3.3
1952–53	55.5	18.1	[4] 6.4	23.8		2.6
Belgium:						
1938	[5] 67.0	16.0	2.6	18.0	[3]	−1.0
1948	73.5	13.7	1.0	12.4	(2.6)	−2.3
1952–53 [6]	68.9	16.0	5.9	16.0		−.9
Netherlands:						
1938	73.0	12.0	[3]	11.0		3.0
1948	69.0	15.0	4.0	24.0		−7.0
1952–53 [1]	59.8	16.1	5.3	18.9		5.2
United Kingdom:						
1938	77.1	13.6	5.8	10.4		−.1
1948	71.8	15.1	6.3	11.9	1.3	−.2
1953	65.9	18.5	9.3	13.8	1.0	.7
Ireland:						
1938	78.3	12.0	1.0	8.6	[3]	1.1
1948	81.7	10.4	1.0	11.9	1.4	−5.4
1952	78.9	12.1	2.0	12.7	−1.7	−1.9
France:						
1938	76.4	[7] (14.7)	[7] 6.6	[7] (10.7)		−1.8
1948	72.0	12.0	4.0	19.0		−3.0
1952–53 [1]	67.5	17.8	10.5	15.5		−.7
Italy:						
1938	62.0	20.0	[3]	19.0		−1.0
1948	70.0	12.0	4.0	21.0		−3.0
1952–53 [1]	68.9	11.4	4.6	22.1		−2.4
Greece:						
1938 [8]	79.5	15.9	5.4	10.6		−6.0
1948	90.0	15.0	7.0	11.0		−16.0
1952–53	81.8	9.4	7.1	11.0		−9.2
Turkey:						
1938	65.3	23.6	[3]	8.7		2.5
1948	75.1	16.5	[3]	12.9		−4.5
1952–53 [1]	75.3	12.6	6.4	15.9		−3.8
Portugal:						
1938	83.0	11.0	3.0	13.0		−7.0
1948	90.0	10.0	4.0	14.0		−14.0
1952–53 [1]	80.0	9.6	3.7	12.0		−1.6
United States:						
1938	76.2	11.8	(1.5)	11.9	−1.2	1.3
1948	68.7	12.4	[9] 4.5	[10] 16.3	1.9	.7
1953	62.6	20.5	[9] 13.6	[10] 16.8	.7	−.5
Canada:						
1939	68.5	9.5	.6	14.0	5.8	2.2
1949	66.6	10.8	1.7	20.2	1.4	1.1
1952	62.1	16.5	6.3	19.8	.8	.7
II. Other countries:						
Finland:						
1938	65.4	10.4	[3]	22.5		1.6
1948	59.9	9.9	[3]	29.0		1.2
1952	59.2	10.7	[3]	31.5		−1.3
Sweden:						
1938–39	71.0	11.0	[11] 2.0	[11] 19.0		0
1948	67.0	14.0	[11] 4.0	[11] 17.0		2.0
1952	63.0	16.0	[11] 5.0	[11] 21.0		1.0
Austria:						
1937	77.0	16.0	[3]	7.0		0
1948	76.0	11.0	[4] 1.0	20.0		−7.0
1952–53 [1]	66.6	13.1	[4] (1.0)	21.0		−3.0
Yugoslavia: 1952–53 [1]	49.8	29.3	18.5	27.8		−6.9
Spain: 1952–53 [1]	72.5	12.5	3.3	15.1		−.2

[1] Fiscal year (July 1952–June 1953).
[2] Occupied by NATO troops.
[3] Not available.
[4] Occupation costs.
[5] Some inventories increases included in private consumption.
[6] Belgium-Luxembourg Economic Union.
[7] The official data (UN ST/STAT/Ser. H/5, p. 63) have been adjusted conservatively by transferring 10 billion francs (or 2.5 percent of the gross national products) from gross capital formation to defense. It must be noted that the official figure was constructed from estimates of the volume of producers' goods output and construction (Ministère de Finance, 1953, p. 641) with all but a small quantity of munitions being ascribed to investment. Yet 11.2 billion francs of the capital investment budget of 1938 were directly on military account, with possibly 7 billion more francs of military spending in special accounts. Cf. Rist and Pirou (1939, p. 538).
[8] Corrected for an evident overestimate of indirect-tax revenues, which have been reduced to 8.7 billion drachmas.
[9] Armed forces only; total national security, 6.2 percent in 1948; 14.1 percent in 1953.
[10] Includes all public construction except military and naval.
[11] "Investment" may still include some expenditures for military equipment. See also Mülhaupt, 1952:60.

Sources:
Norway: OEEC 1954 b: 72; Statistisk Sentral byrå, 1952: 25.
Denmark: OEEC 1954 b: 45; Royal Danish Ministry of Foreign Affairs, 1954: 11, 80.
West Germany: UN ST/STAT/Ser. H/5, 1954: 64; UN E/ECE/157, 1953: 60, 266; Information from FOA.
Belgium: ECA, 1951; UN E/ECE/157, 1953: 60, 266; UN ST/STAT/Ser. H/5, 1954: 60; Information from FOA.
Netherlands: OEEC 1954 b: 69; Information from FOA.
United Kingdom: OEEC 1954 b: 83; Financial Secretary to the Treasury (1946, 1954); UN E/ECE/157, 1953: 60, 266.
Ireland: Central Statistics Office, 1954: 214.
France: UN ST/STAT/Ser. H/5, 1954: 63; Ministère de Finance (1953, p. 641); OEEC 1954 b:50; Information from FOA.
Italy: OEEC 1954 b: 64; Information from FOA.
Greece: INSEE, 1952 b: 231; Sweet-Escott, 1954: 190; OEEC 1954 b: 56; Information from FOA.
Turkey: ECA 1951; Information from FOA.
Portugal: OEEC 1954 b: 76; Information from FOA.
United States: Natl. Ind. Conf. Bd., 1953: 206–7, 486–9: U. S. Dept. of Commerce, 1954: 12, 19.
Canada: Natl. Ind. Conf. Bd., 1953: 628–30.
Finland: UN ST/STAT/Ser. H/5, Feb. 1954: 63
Sweden: UN ST/STAT/Ser. H/5, Feb. 1954: 70; Mülhaupt, 1952: 60; UN E/ECE/157, 1953: 60, 266; O. E. E. C. 1954 b:80.
Austria: ECA, 1951 O. E. E. C. 1954 b:39; Information from FOA.
Yugoslavia: Information from FOA.
Spain: Information from FOA.

Explanatory Notes to Tables VII–IX

Selected Definitions of Terms

A. *Private disposable income*

(1) ***As a percentage of GNP.***—The OEEC sixth annual review does not provide data on disposable income. The major component, however, the consumers expenditure for goods and services, could easily be obtained from the OEEC documents. Some of the countries submitted earlier, especially in the third OEEC annual review, data on private savings for 1938 and 1949, and some countries had in their analytical memorandum to OEEC, figures for 1953 on private savings. In addition, certain countries show in the statistical publications data on private disposable income and private savings. However, most of those savings data have to be accepted with great caution because they frequently represent residuals which might or might not include undistributed corporate profits.

(2) ***Composition of consumers expenditure.***—Comparisons indicate that the details might not be completely comparable. For instance, some countries include fuel and utility consumption in rent; other countries show them under other goods. Differences with regard to tobacco and alcohol consumption exist. Some countries may classify these items under "food," others under "other goods."

B. General Government accounts

(1) ***Total Government revenue as percentage of gross national product.***—The total Government revenue used as a percentage of gross national products has been adjusted to include capital levies and death inheritance and gift taxes in order to get a complete picture of the revenue burden of the country. Revenue from counterpart has not been included because of the specific computation method of the standardized system of the O. E. E. C. (1952), which does not consider counterpart a revenue item. The nontax receipts are not presented according to the usual Treasury standards because most of them have been netted out as negative transfer payments rather than shown as revenue.

(2) *Total Government expenditures as percentage of gross national product.*—The total Government expenditures are in many cases incomplete insofar as a number of countries did not present the information required for capital transfers. To insure comparability, two versions of this table have been presented—one including and one excluding capital transfers and loans to other sectors.

In some cases the Government asset formation had to be estimated with the aid of Government financial documents.

(3) *Index of Government expenditures in constant prices in 1949=100.*—These data also exclude capital transfer of loans to other sectors. But no second version has been presented because it is impossible to convert those transfers into constant prices. Furthermore, in 1938 those transfers played a relatively unimportant role.

The data for the Government expenditures on goods and services were available for 1938, 1948, and 1953 on the constant price basis usually converted into 1951 prices. So far as data on Government gross fixed asset formation were not available, the current price data have been converted to constant prices by using the conversion coefficient of total asset formation. No data on a constant price basis are available for the transfer payments. The data were estimated by applying the ratio or total civil current expenditures to the constant price figures of civil government expenditures of goods and services.

(4) *Percentage of general Government revenues derived from direct taxes.*—The distinction between direct taxes and indirect taxes is not always quite clear cut because some countries consider property taxes direct taxes, but other countries include them in their indirect tax data. The classification of the employer's portion of the social security contributions has been included in direct taxes according to the OEEC classification rules, although this levy is often classified as an indirect tax.

(5) *Percentage of general Government expenditures on defense, gross capital formation, transfer items (including interest on the public debt paid on private account and subsidies and other expenditure).*—Two versions—one including and one excluding capital transfers and loans to other sectors—have been presented whenever possible.

For 1938, Government finance statements were frequently consulted to obtain some of the components.

The defense expenditure data are conceptually not quite the same as those used by FOA, because they should not include pension payments or payments for the acquisition of land and structures, which by nature are transfer payments. However, some of the countries substituted the defense expenditure according to the NATO definitions and adjusted their transfer payments accordingly. However, a check of the percentages with those published in the FOA documents proved that the differences are relatively small.

C. Gross investment account (including domestic capital formation and stocks)

(1) *Gross investment as a percent of gross national product.*—The gross investment was available in most cases. Changes in stock were frequently not included or shown separately but combined with consumer expenditures.

Occasionally the Government gross fixed asset formation had to be estimated from budgetary sources, especially for 1938.

(2) *The percentage of gross domestic capital formation expended on agriculture (including forestry and fisheries); manufacturing (including mining, water, gas, and electricity); transport (including communications); housing; public administration; other services.*—The details of this table might be somewhat uneven because it could not be ascertained whether the capital formation has been appropriated to the industries producing the capital goods or to the industries using them.

D. Gross national product

Whenever gross national product data had been used, they represent gross national products at market prices. This has been done because gross national products at market prices are much less artificial and generally more reliable than gross national products at factor cost or national income data.

It is necessary to emphasize that the data presented in the tables have been compiled and assembled within a relatively short period. It was not possible to undertake any major research to verify the data against existing other sources. It can, however, be reasonably assumed that the data reflect at least the overall magnitudes and their changes.

TABLE VII.—*Private disposable income in the OEEC countries*[1]

Consumers' expenditures				Percent of consumers' expenditures devoted to—						Consumers' savings as percent of gross national product
	Year	1949=100 in constant prices	As percent of gross national product	Food	Clothing	Rent	Consumers' durables	Other goods[2]	Other services	
NATO countries:										
Norway	1938	82	[3]71.0	37.1	12.8	15.9	9.2	11.2	13.8	9.6
	1949	100	64.6	28.1	16.8	5.7	8.2	19.0	22.2	7.5
	1953	108	61.4	30.5	18.1	5.5	8.8	17.1	20.0	7.2
Denmark	1938	84	74.4	58.9	(4)	17.1	6.9	(4)	17.1	6.1
	1949	100	73.4	45.1	12.8	10.6	6.4	5.0	20.1	2.8
	1953	109	69.0	(5)	(5)	(5)	(5)	(5)	(5)	4.5
Germany	1949	100	65.1	35.8	14.9	8.9	40.4	(6)	(6)	2.0
	1953	134	56.1	33.1	15.1	7.7	44.1	(6)	(6)	5.7
Belgium	1949	100	71.2	(5)	(5)	(5)	(5)	(5)	(5)	2.0
	1952	105	67.2	39.6	15.0	18.0	(7)	14.7	12.7	5.7
Netherlands	1938	93	73.3	35.0	9.5	14.8	7.0	17.0	16.7	1.8
	1949	100	[3]64.2	34.1	19.2	6.6	8.7	12.8	18.6	2.9
	1953	101	58.4	39.1	15.9	6.6	7.7	13.2	17.5	2.8
United Kingdom	1938	90	77.0	40.1	10.1	15.6	5.4	11.2	17.6	3.8
	1949	100	70.8	28.3	11.0	8.5	6.4	28.8	17.0	.7
	1953	106	65.9	32.5	[4]9.5	8.0	7.6	26.8	15.6	5.2
Ireland	1938	(5)	[3]80.6	(5)	(5)	(5)	(5)	(5)	(5)	4.7
	1949	(5)	79.4	33.3	14.7	4.6	(7)	34.0	13.4	6.2
	1952	(5)	77.3	33.3	12.7	4.2	(7)	35.8	14.0	7.8
France	1938	99	75.1	(5)	(5)	(5)	(5)	(5)	(5)	2.0
	1949	100	[3]69.6	48.1	17.4	1.6	9.8	8.9	14.2	2.6
	1953	113	69.3	44.8	16.5	2.3	10.9	10.2	15.3	2.3
Italy	1938	98	62.0	(5)	(5)	(5)	(5)	(5)	(5)	(5)
	1949	100	73.2	52.2	12.5	1.1	2.3	17.0	14.9	(5)
	1953	123	71.3	47.4	12.6	2.2	3.1	17.1	17.6	(5)
Greece	1949	100	79.4	(5)	(5)	(5)	(5)	(5)	(5)	(5)
	1952	110	80.0	60.6	13.8	4.9	1.8	11.6	7.3	(5)
United States	1938	62	75.2	24.0	11.0	13.8	6.8	14.7	29.7	1.2
	1949	100	69.3	26.8	11.0	10.7	10.3	13.1	28.1	2.9
	1953	113	62.2	27.1	9.3	12.0	10.2	12.2	29.2	5.4
Canada	1938	58	72.9	24.1	12.2	16.1	7.6	20.0	20.0	3.0
	1949	100	66.5	25.2	13.1	10.9	9.5	22.0	19.3	6.1
	1952	109	62.3	24.6	11.5	12.1	10.9	21.1	19.8	6.0
Other countries:										
Sweden	1938	77	71.0	31.7	14.4	12.1	8.8	14.5	18.5	.1
	1949	100	67.2	31.0	17.2	8.8	8.7	15.5	18.8	1.4
	1952	101	63.0	32.8	15.8	7.8	9.1	16.5	18.0	1.5
Austria	1949	100	73.5	43.0	15.6	3.4	7.8	18.3	11.9	(5)
	1953	112	67.5	41.5	13.2	5.3	7.0	20.0	13.0	(5)

[1] Estimates by Foreign Operations Administration.
[2] Includes alcohol and tobacco.
[3] Marked discrepancy from table VI.
[4] Included in "Food."
[5] Not available.
[6] Included in "Durables."
[7] Included in "Other goods."

TABLE VIII.—*Government expenditures OEEC countries—Regular expenditures (excluding loan and capital transfers to other sectors)*[2]

Country	Year	Index 1949=100 in constant prices	Percent of gross national product	Percentage of expenditures devoted to—				Loans and capital transfers to other sectors (Percent of gross national product)	Total government expenditures
				General civil functions	Defense	Gross assets formation	Transfer payments and subsidies		
NATO:									
Norway	1938	57.2	19.1	50.5	5.7	9.5	34.3	(1)	(1)
	1949	100.0	26.1	36.8	8.9	8.1	46.2	3.0	29.1
	1953	127.9	25.0	36.2	18.1	9.2	36.5	4.0	29.0
Denmark	1938	77.0	20.5	55.8	5.4	7.5	31.3	(1)	(1)
	1949	100.0	21.1	42.0	8.8	5.7	43.5	(1)	(1)
	1953	118.7	22.3	39.2	15.1	9.0	36.7	(1)	(1)
Germany	1949	100.0	30.1	42.4	18.4	6.7	32.5	2.8	32.9
	1953	139.4	30.8	38.4	16.0	8.2	37.4	5.2	36.1
Belgium	1949	100.0	29.7	26.8	9.6	9.8	53.9	3.3	33.1
	1952	102.7	31.2	25.9	18.5	9.4	46.2	3.1	34.4
Netherlands	1938	63.7	24.5	41.9	9.5	12.1	36.5	(1)	(1)
	1949	100.0	28.1	36.7	13.6	8.8	40.9	6.1	34.3
	1953	109.0	28.1	35.4	19.5	11.4	33.7	5.1	33.3
United Kingdom	1938	75.3	27.2	29.0	21.2	11.1	38.7	(1)	(1)
	1949	100.0	34.2	28.7	18.4	8.5	44.4	5.2	39.4
	1953	112.6	35.7	25.8	27.6	10.8	35.8	4.4	40.2
Ireland	1938	(1)	24.3	94.6	5.4	(1)	(1)	(1)	(1)
	1949	(1)	21.5	49.4	5.3	3.8	41.5	(1)	(1)
	1952	(1)	23.5	50.4	7.0	4.3	38.3	(1)	(1)
France	1938	79.2	25.9	21.0	25.4	6.1	47.3	(1)	(1)
	1949	100.0	27.9	29.0	17.7	4.4	48.9	5.7	33.7
	1953	134.2	35.7	22.4	28.3	3.8	45.5	5.0	40.8
Italy	1949	100.0	27.6	23.6	14.0	23.0	39.4	(1)	(1)
	1953	133.2	31.5	24.8	13.4	22.4	39.4	(1)	(1)
Greece	1949	100.0	28.1	24.0	22.9	22.3	30.8	(1)	(1)
	1952	98.3	27.3	30.0	26.3	16.1	27.6	(1)	(1)
Turkey	1948	(1)	17.6	41.1	34.1	19.0	5.8	(1)	(1)
	1952	(1)	19.5	38.4	35.4	21.5	4.7	(1)	(1)
Portugal	1949	100.0	16.8	45.1	18.9	13.0	23.0	1.0	17.8
	1953	108.7	14.8	42.0	27.4	13.4	17.2	.4	15.2
United States	1938	55.0	21.3	50.0	6.6	18.4	25.0	(1)	(1)
	1949	100.0	22.1	36.8	23.5	10.6	29.1	2.6	24.8
	1953	156.7	28.4	27.0	47.5	8.3	17.2	1.0	29.4
Canada	1938	60.0	25.3	51.0	2.7	12.5	33.8	(1)	(1)
	1949	100.0	22.2	34.7	10.4	13.4	41.5	(1)	(1)
	1952	156.7	26.6	26.0	31.9	10.4	31.7	(1)	(1)
Other:									
Sweden	1938/39	49.5	16.5	49.7	13.9	11.5	24.9	(1)	(1)
	1949	100.0	23.9	42.2	15.9	8.5	33.6	(1)	(1)
	1952	114.7	25.9	42.2	18.5	10.5	28.8	(1)	(1)
Austria	1949	100.0	26.9	44.4	4.6	13.0	38.0	(1)	(1)
	1953	117.8	30.1	44.6	1.7	11.8	44.6	2.4	32.6

[1] Not available.
[2] Foreign Operations Administration estimates.

TABLE VIIIb.—*Government revenues in OEEC countries*[2]

Country	Year	Index 1949=100 in constant prices	Percent of gross national product	As percent of expenditures		Percentages of general government revenues derived from—			
				Excluding capital transfers	Including capital transfers	Direct taxes	Indirect taxes	Government property	Transfer from rest of world
NATO:									
Norway	1938	49.2	19.1	100	.....	50.5	35.2	14.3	.....
	1949	100.0	28.9	111	99	53.8	41.4	4.3	0.4
	1953	113.2	28.9	116	100	52.5	44.5	2.5	.4
Denmark	1938	72.9	20.39	99	.....	45.8	38.4	15.8	.....
	1949	100.0	23.17	104	.....	52.0	43.5	4.5	.....
	1953	115.8	23.28	110	.....	52.8	42.0	5.2	.....
Germany	1949	100.0	31.6	115	98	53.9	43.1	2.9	.....
	1953	175.4	35.5	105	96	53.3	43.0	3.7	.....
Belgium	1949	100.0	28.0	88	80	(1)	(1)	(1)	(1)
	1952	109.5	27.5	94	85	53.5	41.0	5.3	.2
Netherlands	1938	53.5	21.4	87	.....	41.1	37.2	20.9	.8
	1949	100.0	32.5	116	95	56.1	38.9	5.0	.....
	1953	107.8	31.5	112	95	57.1	38.3	4.6	.....
United Kingdom	1938	50.0	22.9	84	.....	43.8	47.4	8.8	.....
	1949	100.0	37.7	110	96	50.9	42.4	6.7	.....
	1953	102.6	33.9	95	84	49.1	41.8	7.3	1.8
Ireland	1938	(1)	17.7	73	.....	26.8	54.2	6.1	19.0
	1949	100.0	21.9	102	.....	29.8	64.0	5.2	6.2
	1952	116.0	22.8	97	.....	29.9	65.4	5.0	4.7
France	1938	51.0	18.2	70	.....	33.8	52.5	13.7	
	1949	100.0	29.9	107	89	42.9	51.4	5.3	.4
	1953	130.8	35.0	98	86	47.6	49.8	1.9	.6
Italy	1949	100.0	23.9	90	.....	33.2	58.8	8.0	
	1953	150.5	28.4	87	.....	34.5	55.6	9.9	
Greece	1949	100.0	17.4	81	.....	30.3	65.2	4.5	.....
	1952	138.6	22.1	62	.....	41.9	54.5	3.4	.2
Turkey	1948	100.0	15.6	89	.....	38.1	54.4	7.5	.....
	1952	110.8	13.0	67	.....	29.7	58.5	11.8	.....
Portugal	1949	100.0	15.8	94	89	48.8	47.4	3.1	.6
	1953	121.2	15.0	101	99	48.9	45.7	4.7	.7
United States	1938	47.0	18.0	84	.....	34.8	57.1	7.8	.....
	1949	100.0	22.0	100	89	59.8	38.6	1.6	.....
	1953	150.3	26.3	93	89	67.0	31.7	1.3	.....
Canada	1938	41.9	19.3	76	.....	24.7	68.5	7.0	.....
	1949	100.0	24.6	111	.....	43.1	48.0	8.9	.....
	1952	128.5	27.2	102	.....	47.4	44.7	7.9	.....
Other:									
Sweden	1938–39	48.6	17.4	105	.....	44.6	40.8	14.6	.....
	1949	100.0	26.1	109	.....	57.8	34.4	7.8	.....
	1952	118.2	28.7	111	.....	67.1	27.3	5.6	.....
Austria	1949	100.0	25.4	94	.....	60.8	38.2	1.0	.....
	1953	162.2	33.9	113	104	59.7	38.8	1.5	.....

[1] Not available.
[2] Estimates of Foreign Operations Administration.

TABLE IX.—*Gross investment in OEEC countries* [1]

Country	Year	Index 1949=100	As percent of GNP	Percent of gross investment derived from—			Percent of total gross domestic asset formation devoted to—				
				Government gross fixed asset formation	Private gross fixed asset formation [2]	Change in stocks	Agriculture	Manufacturing	Transportation	Housing	Other services
NATO:											
Norway	1938	62.6	[3] 21.4	8.5	87.3	4.2	13.3	24.7	35.4	20.4	6.2
	1949	100.0	[3] 32.5	[4] 6.5	84.9	8.6	10.6	27.1	32.8	17.2	12.3
	1953	103.7	30.4	[5] 7.5	92.7	−.3	9.3	26.1	30.7	19.6	14.3
Denmark	1938	60.6	13.7	11.2	78.6	10.2	6.8	22.7	4.6	22.7	43.2
	1949	100.0	[3] 17.6	6.8	81.7	11.5	10.0	19.6	18.7	14.0	37.7
	1953	103.0	[3] 17.8	10.6	88.1	1.3	8.9	16.8	18.5	15.0	40.9
Germany	1936	145.4	[3] 21.0	(6)	(6)	(6)					
	1949	100.0	19.8	[7] 10.2	84.2	5.7	9.7	42.5	13.6	18.1	16.1
	1953	175.6	24.1	[8] 10.5	75.5	13.9	8.6	41.1	9.7	26.3	14.3
Netherlands	1938	43.6	11.1	26.9	65.7	7.5					
	1949	100.0	23.1	[9] 10.7	71.8	17.5	5.6	32.4	20.4	18.6	23.0
	1953	92.0	[3] 20.3	[10] 15.8	86.2	−2.0	2.4	[11] 64.6		17.5	[12] 15.5
United Kingdom	1938	91.1	[3] 10.5	28.7	71.3						
	1949	100.0	12.5	[13] 23.2	74.7	2.1	5.7	40.8	15.2	21.4	16.8
	1953	111.9	14.3	[14] 26.9	65.9	7.1	3.9	41.8	12.4	26.6	15.2
Ireland	1938	68.6	7.8	(6)	(6)	(6)					
	1949	100.0	13.5	6.3	83.3	10.4	6.7	27.9	15.7	20.7	29.0
	1952	93.3	[3] 13.2	8.1	100.0	−8.1	6.0	23.9	11.9	23.9	34.3
France	1949	100.0	[3] 17.4	[15] 7.0	72.7	20.3					
	1953	75.7	[3] 12.0	[16] 11.3	96.3	−7.5					
Italy	1938	125.3	18.9	(6)	(6)	(6)					
	1949	100.0	18.5	(6)	(6)	(6)	13.9	38.0	18.2	13.1	16.8
	1953	140.7	[3] 19.7	(6)	(6)	(6)	13.9	33.3	15.6	20.6	16.6
Greece	1938	99.9	[3] 12.7	(6)	(6)	(6)					
	1949	100.0	[3] 20.4	32.8	34.1	33.1	11.8	15.5	24.3	30.4	18.0
	1952	75.6	[3] 13.7	31.3	57.9	10.8	9.2	29.8	12.7	30.3	18.0
Turkey	1949						25.8	14.5	29.0	16.1	14.6
	1953						23.3	31.6	21.1	18.7	5.3
Portugal	1938	86.2	12.8	(6)	(6)	(17)					
	1949	100.0	13.9	[18] 15.7	84.3	(17)	6.0	28.5	20.2	22.4	22.9
	1953	111.5	[3] 13.4	[19] 14.7	85.3	(17)	7.7	34.7	11.8	20.7	25.1
United States	1938	47.1	11.3	35.0	75.3	−10.3	6.1	34.6	4.5	17.6	37.2
	1949	100.0	15.0	[20] 15.6	90.5	−6.2	8.8	29.4	9.5	23.7	28.6
	1953	133.8	16.4	[21] 14.3	82.1	3.5	6.2	33.8	8.4	23.9	27.7
Canada	1938	42.9	[3] 15.1	21.2	80.1	−1.3	14.4	31.9	16.5	27.3	9.9
	1949	100.0	21.6	13.1	84.1	2.8	12.9	30.7	15.2	22.4	18.8
	1953	120.4	[3] 22.1	12.7	81.0	6.3	12.6	36.8	17.2	17.6	15.8

Other:											
Sweden	1938	90.5	[3] 18.8	10.1	78.7	11.2	6.4	25.7	21.6	34.6	11.7
	1949	100.0	[3] 17.2	11.8	85.4	2.8	8.3	37.1	18.6	25.8	10.2
	1952	123.7	[3] 20.8	13.1	75.8	11.2	6.9	32.4	25.9	23.6	11.2
Austria	1949	100.0	[3] 20.7	15.6	62.5	21.9	14.5	39.2	15.9	15.9	[12] 14.5
	1953	82.8	[3] 15.8	[22] 22.6	92.5	−15.1	[23] 11.0	[23] 48.1	[23] 13.0	[23] 16.2	[12 23] 11.7

[1] Prepared by Mr. J. D. Berolzheimer, FOA. Not yet reconciled with table VI.
[2] Excludes Government financing through loans and transfers to other sectors.
[3] Marked discrepancy with table VI.
[4] With loans and transfers to other sectors included: 15.7 percent.
[5] With loans and transfers to other sectors included: 20.7 percent.
[6] Not available.
[7] With loans and transfers to other sectors included: 24.3 percent.
[8] With loans and transfers to other sectors included: 32.1 percent.
[9] With loans and transfers to other sectors included: 37.1 percent.
[10] With loans and transfers to other sectors included: 40.9 percent.
[11] Includes "transportation" and "other service trades."
[12] "Public administration" only.
[13] With loans and transfers to other sectors included: 64.8 percent.
[14] With loans and transfers to other sectors included: 57.7 percent.
[15] With loans and transfers to other sectors included: 39.8 percent.
[16] With loans and transfers to other sectors included: 53.0 percent.
[17] Change in stock included in consumers' expenditures.
[18] With loans and transfers to other sectors included: 22.9 percent.
[19] With loans and transfers to other sectors included: 17.7 percent.
[20] With loans and transfers to other sectors included: 32.9 percent.
[21] With loans and transfers to other sectors included: 20.4 percent.
[22] With loans and transfers to other sectors included: 37.8 percent.
[23] 1952.

TABLE X–1.—*The Soviet net national product, 1937–53, by industrial origin* [1]

Industry	1937		1948		1953	
	(2)	(3)	(2)	(3)	(2)	(3)
Agriculture [4]	36	100	28	86	23	102
Industry [5]	34	100	36	121	46	221
Transportation and communications	7	100	8	120	10	211
Civil and military services	22	100	28	142	21	155
Total gross national product	100	100	100	113	100	162

[1] From estimates prepared by Dr. Herbert Block, U. S. Department of State.
[2] Percentage of gross national product in that year, measured in 1937 factor costs (Bergson), adjusted for higher estimates of imputed land rents.
[3] Index, 1937=100, in same measure.
[4] Includes imputed land rentals.
[5] Includes manufacturing, handicrafts, mining, forestry, and fisheries (Soviet definition of "Industry"), plus construction.

TABLE X–2.—*The relative productivities of the major industrial sectors, 1937 and 1953*

Industry	Labor force [1] (percentage of total)		Income originated [2] (percentage of total)		Relative productivity [3]	
	1937	1953	1937	1953	1937	1953
Agriculture	64	57	36	23	57	40
Industry	19	22	34	46	182	214
Transportation and communications	4	4	7	10	178	233
Civil and military services	13	17	22	21	170	126
Total	100	100	100	100	100	100

[1] Percent of total active population, calculated largely from Schwartz (1954, p. 521); W. Eason in A. Bergson, (1953, p. 108); and Shimkin (1953), table IV.
[2] From table X–1.
[3] "Income originated" divided by "Labor force."

TABLE X–3.—*End uses of the Soviet gross national product, 1939–53*

Expenditure	1937 [1]		1948 [2]		1953 [2]	
	(3)	(4)	(3)	(4)	(3)	(4)
Private consumption	58	100	48	93	47	130
Current Government consumption	20	100	29	162	27	216
Administration [5]	3	100	4.6	171	3.5	191
Defense [6]	8	100	14	196	15	308
Health and education	9	100	10	128	7.8	142
Gross investment	21	100	23	121	26	199
Total gross national production	100	100	100	113	100	162
Private consumption per capita [7]		100		78		103

[1] Calculated from A. Bergson and H. Heymann (1953, p. 71) adjusted for an increased estimate of land rental, for the inclusion of internal security costs in defense, and for the transfer of Communist Party administrative functions from commercial services (health, education, etc.) to administration.
[2] From estimates prepared by Dr. Herbert Block, U. S. Department of State.
[3] Percentage of gross national product in that year, measured in 1937 factor costs (Bergson), adjusted for higher estimates of imputed land rents.
[4] Index, 1937=100, in same measure.
[5] Includes the estimated consumption of goods and services by the Communist Party apparatus.
[6] Includes overt military expenditures, plus those estimated for internal security, atomic energy, and other special weapons. Excludes estimates of indirect military costs, e. g., subsidies to war-supporting industries.
[7] Estimated populations: 1937, 165 million; 1948, 196 million; 1953, 209 million persons.

TABLE X–4.—*The structure of urban consumer expenditures in the U. S. S. R., 1928 and 1937* [1]

Commodity class	Percent of total expenditures	
	1928	1937
Food	48.3	56.7
Of which, grain products and legumes	(12.6)	(20.9)
Clothing [2]	24.8	19.9
Rents and allied expenditures [3]	11.3	5.7
Other goods	12.1	15.0
Of which, alcohol and tobacco	(5.3)	(9.9)
Services [4]	3.6	3.6
Total	100.0	100.0

[1] Chapman: (1954 p. 139). The 1937 data agree fairly well with the unpublished materials of Dr. Joseph Berliner for urban households in 1940 with a disposable income of 3,000–4,200 rubles annually. The major differences rest in the appraisals of clothing and of rents and allied expenditures, for which Berliner gives 10.7 percent and 10.1 percent, respectively. His total for food (presumably including alcoholic beverages) 66.2 percent, against Chapman's 64.4 percent.

[2] Textiles, garments, knitwear, shoes, haberdashery, and notions.

[3] Rents, building materials, kerosene, and watches. Data on firewood are lacking.

[4] Transportation and entertainment only. Berliner's study shows that medical expenses form a small but measurable part of Soviet urban consumer expenditures among households with disposable incomes of 3,000 rubles or more in 1940.

TABLE X–5.—*Expenditures and revenues of the Soviet Government, 1937–53, in current rubles at market prices* [1]

	Percentage of total		
	1937	1948	1953
A. Expenditures:			
Current civil functions	27.1	24.4	19.3
of which:			
Administration	(4.1)	(3.5)	(2.8)
Education [2]	(15.5)	(14.9)	(11.9)
Health [3]	(6.5)	(5.3)	(4.7)
Ministry of Defense	16.5	17.9	21.2
Other current functions	9.6	9.8	16.0
Of which, internal security	(2.8)	(4)	(4)
National economy [5]	40.8	40.3	35.1
Transfer to households [6]	6.0	7.6	8.4
Total	100.0	100.0	100.0
B. Revenues:			
Direct taxes and forced loans	15.0	17.8	16.0
Of which:			
Direct taxes	(3.7)	(8.1)	(8.5)
Social insurance	(6.0)	(3.9)	(4.3)
Forced loans	(5.4)	(5.8)	(3.2)
Indirect taxes [7]	78.0	66.8	58.2
Other revenues [8]	7.0	15.3	25.8
Total	100.0	100.0	100.0
C. Ratio, expenditures to revenues	97.2	90.4	95.4
Excluding loans and savings	102.7	95.9	100.9

[1] After Holzman (1953); Nove (1954); and Bergson and Heymann (1953, pp. 26–27).

[2] Includes expenditures on the Communist Party apparatus, on military research and development, on educational construction, and on scholarships which belong, strictly, under other categories.

[3] Includes some capital investments.

[4] Not available.

[5] Includes about two-thirds of all gross capital formation, the remainder being self-financed by Government enterprises; gross expenditures on machine-tractor stations, and net subsidies to other economic sectors, some fictitious.

[6] Social security, etc.

[7] Turnover (or sales) taxes, taxes on the income of collective farms and cooperatives, and taxes on the profits of state enterprises.

[8] Largely, the gross revenues of machine-tractor stations and the aggregate of customs duties and revenues from abroad (reparations, tribute), in about equal proportions. The large increase, 1948–53, is partly explicable by the transfer to the machine-tractor stations of many functions and persons formerly in the collective farm system.

TABLE X–6.—*Distribution of gross investment in the Soviet Union, 1933–37, 1948, and 1953*

Sector	In percentages of total investment in current prices		
	1933–37 [1]	1948 [1]	1953 [2]
1. Industry [3]	37.1	49.4	50.2
Of which, light and food industries	[4] (7.6)	(7.6)	(4.3)
2. Agriculture	19.1	16.1	[5] 18.4
3. Transportation and communications	16.4	11.0	10.0
4. Commerce	2.0	1.0	1.2
5. Other Services	25.4	22.4	(20.2)
Of which, housing	9.1	16.5	(11.0)
Total	100.0	100.0	100.0

[1] Source: N. Kaplan in A. Bergson (editor): Soviet Economic Growth (Row, Peterson & Co., Evanston, Ill., 1953), pp. 52–66.
[2] Source: A. Nove: Soviet Budgets After Stalin, The Review of Economics and Statistics, XXXVI: 415–424, 1954; p. 420.
[3] Includes manufacturing, mining, utilities, construction, forestry, and fisheries.
[4] 1933–36 average.
[5] Includes investments self-financed by collective farms and others financed by long-term credits from the State Agricultural Bank.

TABLE XI-1.—*The national income of Poland by industrial origin, in constant (1938) prices*

Component	Measure	1938	1946	1947	1948	1952	1953
I. Large- and medium-scale manufacturing, mining and utilities.	(*a*) Index of net output, 1938=100 [1]	100			162	240	
	(*b*) Employment (thousand persons)	[2] 808	[3] 1,202	[3] 1,445	[3] 1,562	[4] 2,330	[5] 2,450
	(*c*) Net product (billions of 1938 zlotys)	[6] 4.08	[3] 2.63	[6] 5.89	[7] 6.61	[7] 9.78	[8] (10.37)
	(*d*) Product per employed person (thousands of 1938 zlotys).	5.05	2.19	4.08	4.23	4.20	(4.23)
II. Handicrafts	(*a*) Employment (thousand persons)	[9] 1,300	[9] 593	[10] (373)	[10] (260)	[10] (180)	[10] (180)
	(*b*) Net product (billions of 1938 zlotys)	[9] 1.62	[9] 0.74	[9] 0.55	[11] (0.39)	[11] (0.27)	[11] (0.27)
	(*c*) Product per employed person (thousands of 1938 zlotys).	1.25	1.25	(1.46)	[11] (1.5)	[11] (1.5)	[11] (1.5)
Net product from industry (sum of Ic and IIb).	Billions of 1938 zlotys	5.70	3.37	6.43	7.00	10.05	(10.64)
Productivity in all industry (per employed person).	Index, 1938=100	100	69	131	142	148	150
III. Agriculture, forestry, and fisheries	(*a*) Grain output (million metric ton)	13.46	[12] 5.64	[12] 8.09	9.0	10.2	(11.0)
	(*b*) Net product (billions of 1938 zlotys)	[5] 6.90	[5] 2.55	[6] 3.44	(3.8)	(4.8)	(5.2)
	(*c*) Labor force (million persons)	[13] 10.6	[13] 7.44	[10](7.7)	[10](8.0)	[10](7.6)	[10](7.5)
	(*d*) Product per person in agricultural labor force (thousands of 1938 zlotys).	0.65	0.34	(0.45)	(0.42)	(0.63)	(0.69)
IV. Transportation and communications	(*a*) Net product (billions of 1938 zlotys)[17]	0.90	1.22	1.35	1.48	2.14	(2.24)
	(*b*) Employment (thousand persons)	[18](433)	[19] 480	[20](520)	[20](570)		
	(*c*) Product per person (thousands of 1938 zlotys)	(2.08)	(2.54)	(2.60)	(2.60)		
V. Construction	(*a*) Net product (billions of 1938 zlotys)	0.75	[21](0.61)	[21]0.70	[21] 0.92	[21] 1.48	[22] 1.64
VI. Personal and governmental services	(*a*) Net product (billions of 1938 zlotys)[23]	3.45	(3.20)	(3.30)	(3.35)	(4.40)	(4.40)
National income (sum of lines Ic, IIb, IIIb, IVa, Va, VIa).	(*a*) Billions of 1938 zlotys	17.70	10.95	15.22	16.55	22.87	24.12
	(*b*) Index, 1938=100	100	62	86	94	129	136
	(*c*) Productivity per employed person, index, 1938=100 [24]	100	81	105	115	139	145

[1] See table XI-2.
[2] Polish Ministry of Information (1941, p. 111).
[3] Mauldin and Akers (1954, p. 159).
[4] U. N. E/ECE 174 (1954, p. 73).
[5] Centralny Urzad Planowania (1947, p. 155).
[6] Central Statistical Office (1949, p. 1).
[7] Calculated by multiplying the net product in 1938 (408 billion 1938 zlotys) by the index of net output (line Ia).
[8] Calculated from the 1952 datum in accordance with employment (cf. note 4 above) and an extrapolation of productivity.
[9] Centralny Urzad Planowania (1947, 73).
[10] Interpolated from data for 1946 and Dec. 31, 1947. (See note 9 and Central Statistical Office (1949, p. 70).) Data for later years are extrapolations of the 1938–48 trend.
[11] Approximations based on extrapolations of 1938–48 trends.
[12] Centralny Urzad Planowania (1945, p. 8).
[13] Central Statistical Office (1949, p. 45).
[14] Calculated from Mauldin and Akers (1954) as follows: (1) It was assumed that the labor force grew, from 1931 to 1938, at the same rate as total population, or by 9 percent (cf. pp. 19, 165). The 1938 estimate (including military) is 16.1 million persons. (2) The total of employment in industry and handicrafts in 1938 was 2.11 million, or 0.19 million less than in 1931. But this decline and more was concentrated in handicrafts, since employment in manufacturing, mining, and utilities grew from 634,000 in 1931 to 808,000 in 1938 (Polish Ministry of Information, 1941, p. 111). Employment in transportation, communication, and construction has been increased by the same proportion, 27 percent. Since the calculated total employment in industry, handicrafts, transport, and construction in 1938 closely approximated that for 1931, the size of the other civilian services had been held constant, at 1.86 million. However, the Armed Forces estimate was raised from 190,000 in 1931 to 350,000 in 1938, so that the total employment in services in 1938 has been assessed at 2.45 million. To the total nonagricultural employment of 5.05 million in 1938 must be added at least 400,000 unemployed (Buell, 1939, pp. 139–142). In sum, the nonagricultural component of the Polish labor force in 1938 is estimated to have been 5.45 million, leaving 10.65 million persons in agriculture, forestry, and fisheries.
[15] Centralny Urzad Planowania (1947, p. 121).
[16] Based on the following calculations: In 1931, 84.5 percent of the rural population was dependent upon agriculture, forestry, and fisheries; also 49.8 percent of the agricultural population was in the labor force (Mauldin and Akers, 1954, pp. 123, 165). In 1946, only

78.3 percent of the rural population depended on agriculture and related pursuits (Ibid., p. 123; Centralny Urzad Planowania, p. 121), but the participation rate had climbed to 58.7 percent. It is estimated that, with the continuing decline of handicrafts and private trade, and with counterbalancing increases in education and other Government services, the percentage of the rural population in agriculture, forestry, and fisheries returned to 85 percent by 1948 and then climbed to an asymptotic 90 percent by 1952 and 1953. At the same time, the revival of education and the increase in the birth rate after 1946 unquestionably forced some decline in the rate of participation in the agricultural labor force. Arbitrarily we may say it reached a point halfway between the 1946 peak and the 1931 level by 1953, i. e., 54.3 percent. For other years the figures are interpolated. Finally, the size of the rural population can be estimated from Mauldin and Akers' data as 16.2 million in 1947, 16.3 million in 1948, and 15.3 million in 1952 and 1953.

[17] Calculated from data on railroad freight and passenger traffic, partially interpolated. The weights used for net income produced are 1 metric ton-kilometer=0.0236 1938 zlotys, and 1 passenger-kilometer=0.0360 1938 zlotys. Source data include Centralny Urzad Planowania (1947, p. 83) and U. N. ECE transportation (1953, pp. 83, 108).

[18] See note 16.

[19] Centralny Urzad Planowania (1947, p. 121).

[20] Interpolated from data for 1946 and July 1949. (See note 19, and Mauldin and Akers, 1954, p. 94.)

[21] Based on an index of building materials output (cement, bricks, glass), cf. table XI–2 and Central Statistical Office (1949, p. 74). The official figure for 1947, 496 million 1938 zlotys originated in construction (id., p. 1), probably understates the private sector.

[22] Extrapolated from the 1950–52 of the building materials index. (See table XI–2 and U. N. E/ECE 174 (1954, p. 275).)

[23] The 1938 figure is from official data. For subsequent years, the figures are based on relative estimates for civilian and military employment in services: 2.20 million in 1938, 2.05 million in 1946, 2.10 million in 1947, 2.15 million in 1948, and 2.80 million in 1952 and 1953.

[24] Estimated total employment: 1938, 15.6 million; 1946, 12.0 million; 1947, 12.4 million; 1948, 12.8 million; 1952, 14.5 million; and 1953, 14.6 million; or as an index with 1938=100. 1946, 76.9; 1947, 79.5; 1948, 82.0; 1952, 92.9; and 1953, 93.6.

TABLE XI–2.—*Poland: Index of large and medium-scale mining and manufacturing, selected commodities* [1]

[In 1938 prices]

Industry	1938				Physical output [2]	1938=100			
						Index of output		Product of output	
	Wage earners	Hourly wages (in zlotys)	Product (in zlotys)	Weight (in percent)		1948	1952	1948	1952
Mining				21.5					
Coal	79,400	1.14	90,516	18.6	38.1 million metric tons	184.5	221.5	34.3	41.2
Petroleum	10,500	1.00	10,500	2.2	507 thousand metric tons	26.6	46.5	.6	1.0
Iron ore	7,500	.47	3,525	.7	872 thousand metric tons	75.6	117.8	.5	.8
Metallurgy and metalworking [3]	179,200	.79	141,568	29.1					
Rolled products				21.7	1.1 million metric tons	118.2	200.0	25.6	43.4
Machine tools				1.5	1.74 thousand metric tons	390.8	1,081.6	5.9	16.2
Railway cars				1.2	0.57 thousand units	2,280.7	2,959.6	27.4	35.5
Batteries				4.7	1.8 thousand metric tons	205.6		9.7	(14.6)
Chemicals	48,000	.81	38,880	8.0					
Coke				4.5	2.3 million metric tons [2]	226.1	321.7	10.2	14.5
Sulfuric acid				.5	189 thousand metric tons [2]	117.5	195.2	.6	1.0
Caustic soda				.9	30 thousand metric tons	160.0	238.0	1.4	2.1
Rayon				.7	6.2 thousand metric tons	114.5	182.2	.8	1.3
Soap				1.4	55.4 thousand metric tons [4]	33.2	135.4	.5	1.9

Stone, glass, and ceramics	67,900	.52	35,308	7.3					
Cement				3.5	1.72 million metric tons	104.7	154.7	3.7	5.4
Bricks				2.5	1.85 billion units [3]	53.0		1.3	(2.1)
Glass				1.3	25 thousand metric tons	304.0	532.0	4.0	6.9
Textiles	154,000	.73	112,420	23.1					
Cotton fabrics				10.7	400 million square meters [2]	86.0	118.7	9.2	12.7
Woolen fabrics				8.2	40 million square meters [2]	104.7	160.5	8.6	13.2
Linen fabrics				1.9				(1.9)	(1.9)
Rayon fabrics				1.1	23 million square meters [2]	137.0	294.8	1.5	3.2
Knitted wears				1.2	3.1 thousand metric tons [2]	200.0		2.4	(3.5)
Paper	16,500	.68	11,220	2.3	205 thousand metric tons	120.4	169.3	2.7	3.9
Foodstuffs	62,900	.67	42,123	8.7					
Raw sugar				4.6	491.3 thousand metric tons	127.1	210.9	5.8	9.7
Flour milling				4.1		83.3	90.0	3.4	3.7
Total product and index			[4] 486,080	100.0				162.0	239.7

[1] Practically all figures for 1938 employment, hourly wages, weights, and output were taken from Polish Ministry of Information (1941, passim); figures on physical output in 1948 and 1952 were taken from U. N. E/ECE 174, 1954, p. 275; in a few cases where data were not available arbitrary estimates were made; such estimates were indicated by figures in parentheses.

[2] Output in 1937, from U. N. E/ECE 174, 1954, p. 275.

[3] Includes electrotechnical.

[4] Output in 1937, from Polish Ministry of Information (1941).

[5] The components not covered include wood products (except paper), clothing, printing and allied and leather goods, with an aggregate wage product of 87,600 zlotys per hour. The coverage achieved thus approximates 85 percent.

TABLE XI–3.—*The Polish gross national product, by end-use, 1938–52*

End use	1938		1947		1952	
	(1)[a]	(2)	(1)	(2)	(1)	(2)
1. Private consumption	76.8	100	72.9	82	[3] 44.8	75
2. Government consumption	10.7	100	[4] 9.4	[4] 76	[5] 32.3	389
Including Defense	4.5	100	2.8	54	9.2	264
Health and Education	2.3	100	2.1	79	[6] 9.8	[6] 551
Other	3.9	100	4.4	97	[7] 13.3	[7] 440
3. Gross public and private investment	12.5	100	[8] 17.7	122	[9] 22.9	236
Total, gross national product	[10] 100.0	100	[10] 100.0	86	100.0	129
Per capita private consumption [11]	.....	100	.....	120	.....	102
Including health and education [11]	.....	100	.....	120	.....	[6] 119

[1] Percentage of gross national product.
[2] Index in constant prices, 1938=100.
[3] Residual.
[4] Government consumption, including its components, calculated as follows: (*a*) The official figure of Polish national income (Marxist) in 1947 in 1937 (=1938) prices was 3.3 percent lower than the national income calculated in table XI–1. In addition, an allowance of 4 percent had to be introduced for depreciation, making the total expansion coefficient 1.074. (*b*) This coefficient was applied to the Polish figure on national income (Marxist) in 1947 prices, giving an estimate of 1,495 billion 1947 zlotys for the 1947 gross national product. (*c*) The figure for investment as a share of gross national product in 1938 zlotys was deflated by a coefficient of 0.808, corresponding to the difference in the share of industry in the national income as expressed in 1947 rather than in 1937 prices. (*d*) The residual product, in 1947 prices, then corresponded to 1,281 billion 1947 zlotys. Of this residual product, 11.4 percent was taken by government current expenditures (including transfer payments), and including 3.41 percent for defense, 2.57 percent for health and education, and 5.39 percent for other current civil uses. (*e*) The residual product was then recomputed in 1938 terms by equating it to 82.3 percent of the gross national product. (*f*) Internal allocations within the residual product were retained in 1947 price relationships, assuming that the shifts in scarcities between 1937 and 1947 did not significantly affect consumers' goods-services relations. (*g*) Private consumption is a terminal residual. (See Central Office of Statistics, 1949).
[5] Government consumption in current prices in 1952 is derived from the official budgetary figures. (Dziennik Ustaw No. 17, Apr. 11, 1952) linked to the gross national product estimate by two assumed relationships: (*a*) That all investment is included in the budget. (*b*) That, as a result of systematic government policies to foster urbanization and industrialization, current prices (heavily affected by both subsidies and turnover taxes) correspond closely to the scarcity relationships of 1938 rather than the freer market conditions of 1947.
[6] Includes the expenses of the Communist Party.
[7] Of which 4.1 for administration and about 9.2 for net transfers to the Soviet account. See also U. N. E/ECE, 1954, p. 61.
[8] Investment datum in 1938 zlotys (2.8 billion) from Secomski (1950), as a percentage of gross national product in 1938 zlotys, cf. note 1.
[9] The estimate of investment was calculated in 2 ways: (*a*) By deflating the official figure on gross investment in 1952, 7.5 billion 1938 zlotys (derived from Beirut, 1953). The coefficient of deflation used was the ratio of the calculated value of industry and handicrafts in 1952 (10.05 billion zlotys, cf. table XI–1) to the official value of 14.0 billion zlotys. This deflated the official investment figure to 5.41 billion 1938 zlotys. (*b*) The other method was a more laborious direct calculation, involving an estimate of the shares of 1938 gross investment derived from construction and outlays for producers' durable, respectively. The estimate reached was 1.75 billion 1938 zlotys for construction (including the incomes originated in construction, one-half of ferrous metallurgy; all stone, glass and ceramics, and 80 percent of wood products) and 0.55 billion 1938 zlotys for producers' durables. The value of construction in 1952 was calculated by multiplying the 1938 figure by 1.97, the index for building materials reached in 1952 (table XI–1, 2). That for producers' durables was calculated by working out the ratio between the average increment in electrical power production in 1951–53 to that in 1938, or 3.73. (For base data see Central Statistical Office, 1949, p. 2; U. N. E/ECE 174, p. 275.) The resulting estimate for 1952 investment is 5.50 billion 1938 zlotys. (*c*) The final figure used, 5.45 billion 1938 zlotys is an average of the 2 estimates.
[10] Estimated depreciation of 4 percent added to national income. See table XI–1 and U. N. E/ECE, 1919, p. 231.
[11] For population estimate, see Mauldin and Akers (1954, p. 104). Index of population, with 1938=100, is 1947, 68.2; 1952, 73.9.
[a] Data on end-use of national product derived from Polish Ministry of Information (1941, p. 156), Centralny Urzad Planowonia (1947, p. 156) and Secomski (1950). The government expenditures are for the fiscal year 1938–39.

TABLE XI–4.—*The structure of consumer expenditures in Poland*

[Percent]

Commodity group	Prewar	1950	1953 (second half)
Food	48.2	52.5	64.1
Clothing	14.6	21.7	17.7
Heat and light	10.2	7.4	6.7
Rent	12.0	3.3	1.6
Household goods	3.7	4.3	3.6
Other (including alcohol and tobacco)	11.3	10.8	6.3
Total	100.0	100.0	100.0

Source: UN E/ECE, 1954, p. 64.

TABLE XI–5.—*Expenditures and revenues of the Polish Government, 1938–52*

Factor	1938–9 [1]		1947 [2]		1952 [3]	
Expenditures	(4)	(5)	(4)	(5)	(4)	(5)
Defense	4.5	100	2.8	54	9.2	264
Health and education	2.3	100	1.7	63	9.8	551
Other current civil functions	3.9	100	4.4	97	13.3	440
Gross investment	[6] 5.4	100	[7] 1.8	....	22.9	547
Transfer payments [8]	2.6	100	3.4	112	6.8	339
Total	18.8	100	[7] 14.1	....	62.1	426
Revenues:						
Direct taxes [9]	5.7	100	[10] 3.8	57	....	....
Government monopolies [11]	3.8	100	4.0	91	....	....
Other indirect taxes	1.2	100	2.7	194	[12] 43.1	4,600
Other Government enterprises	0.7	100	[13] 0.6	74	....	....
Total	11.4	100	11.4	86	63.0	713

[1] Source: Polish Ministry of Information (1941, p. 156); Buell (1939, p. 139, 163–170).
[2] Source: Central Statistical Office (1949, pp. 1, 8–9, 238–241, 250–251).
[3] Source: Dziennik Ustaw (No. 17, April 11, 1952).
[4] Percent of gross national product, in 1938 prices, of table XI–3.
[5] Index in fixed prices, 1938=100.
[6] Includes investments financed through domestic and foreign loans.
[7] Includes budgetary investments only.
[8] Includes interest on the public debt, subsidies to consumers, pensions, etc.
[9] On incomes (private and business) and on property.
[10] Includes a capital levy of 0.74 percent of the g. n. p.
[11] Alcohol, matches, tobacco, salt, and lotteries.
[12] Source: UN E/ECE 174, 1954, p. 61.
[13] Includes income from the Polish National Land Fund.

TABLE XI–6.—*Percent distribution of investments in both economic plans*

	Plans		End-year of plan	
	3-year 1947–49	6-year 1950–55	1949	1955
Total	100.0	100.0	100.0	100.0
Industry	37.9	42.9	40.0	41.8
Agriculture and forestry	12.6	11.9	11.0	12.7
Transportation and communications	22.2	14.9	18.4	14.8
Trade	4.4	4.2	5.1	4.3
Social and cultural installations	7.4	8.8	7.6	9.1
Residential building	7.8	8.3	7.0	9.8
Administrative building	2.5	.6	2.1	.4
Municipal economy, building enterprises, and other	5.5	8.4	8.8	7.1

Source: Secomski (1951, p. 49).

TABLE XII–1.—*Industrial origins of the East German gross national product at factor cost, 1936–52* [1]

[Billion 1936 reichsmarks]

Industry of origin	1936	1948	1950	1952
Agriculture, forestry, fisheries	3.1	2.1	2.4	3.0
Industry and handicrafts	9.9	6.3	8.6	10.6
Including manufacturing, mining, utilities	(7.4)	[2] (4.5)	[2] (6.3)	[2] (8.1)
Construction	[3] (1.2)	[4] (.4)	[4] (.8)	[4] (1.0)
Handicrafts	[5] 1.3	[5] (1.4)	[5] (1.5)	[5] (1.5)
Transportation, communications and services	4.5	4.2	4.9	5.0
Total	17.5	12.6	15.9	18.6

[1] Estimates prepared by Mr. F. Sanderson, Department of State, except as noted. The 1936 data differ from those published by the Statistisches Bundesamt (1954, p. 554) in coverage (includes East Berlin) and in concept (includes depreciation).

[2] The 1936 estimate times the index of gross industrial output for each year (1948 interpolated between 1946 and 1949). See Statistisches Bundesamt (1954, p. 544).

[3] From Statistisches Bundesamt (1954, p. 554) adjusted upward 7 percent for estimated construction in East Berlin.

[4] Projected by multiplying the 1936 estimate by an index of building materials (cement, bricks, and window glass) output; with cement weighted at 37 percent, bricks at 59 percent, and glass at 4 percent of the 1936 total. For basic data see Landerrat des Amerikanischen Besatzangsgebiets (1949, pp. 273, 306–307, 467); Statistisches Bundesamt (1954, p. 545), and U. N. E/ECE 174 (1954, p. 273).

[5] Residual. Note, however, that handicrafts employment has remained high: 873,700 in 1946; 1,141,300 in 1948; and 980,000 in 1951 (all excluding East Berlin) compared to an estimate of 915,000 for 1936 (including East Berlin). (Statistisches Bundesamt 1954, p. 547.)

TABLE XII–2.—*The East German gross national product, by end-use (1936–52)* [1]

[Billions of 1936 reichsmarks]

End-use	1936	1948	1952
Private consumption	12.8	9.5	11.6
Government consumption [2]	4.0	3.5	4.7
Net contributions to foreign account [3]	.2	3.2	3.5
Gross investment	3.1	1.1	3.4
Total gross national product at market prices	20.1	17.3	23.2
Less indirect taxes	2.6	4.7	4.6
Equals gross national product at factor costs	17.5	12.6	18.6
Index of per capita private consumption [4]	100	66	81
Index of gross investment	100	35	110

[1] Estimate prepared by Mr. F. Sanderson, Department of State.

[2] Excludes occupation costs and transfer payments. Includes administration, state-financed health and education and military (1936) or paramilitary (1948–52) expenditures.

[3] For 1948 and 1952, includes reparations to the U. S. S. R., deliveries of goods and services to occupation authorities, the net cost of uranium mining operations, and items of 0.1 (1948) and 0.2 (1952) billion 1936 reichsmarks for the deterioration of the terms of trade (essentially with the U. S. S. R. and other captive countries).

[4] A 1936 population of 16.48 million for East Germany, including East Berlin, was calculated by applying to the 1939 census figure decrements for 1938 and 1937 corresponding to the pertinent provincial rates of natural increase for those years. See Statistisches Bundesamt (1954, p. 535), and Länderrat, etc. (1949, p. 50). The 1948 figure of 18.57 million is an interpolation of official data for 1946 and 1950. The 1952 figure is an official estimate, cf. SBZ Archiv (1953, p. 188).

TABLE XIII.—*Trade agreements between eastern and western European countries*

[Countries arranged in alphabetical order]

[NOTE.—This list includes trade agreements between eastern and western European countries in force in June 1954. Although a few agreements may have escaped notice, the list is believed to be nearly complete. Wherever possible, the information is based on official sources. In some cases, it has been necessary to rely upon press reports. Value figures are given in millions of dollars; quantities are expressed in metric tons, unless otherwise specified.]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Bulgaria—							
Austria	1. VII.53-30.VI.54 (Signed 3.VII.53)	10.5	Wheat (10,000), rye (20,000), maize (20,000), feeding-barley (5,000), rice (1,000), tobacco (500), vegetables (30,000), eggs, other food and feeding stuffs, manganese and chrome ores ($0.1).	10.5	Iron and steel, industrial and transport equipment, machinery, ball bearings, chemicals, pulp, paper, rayon, other manufactures.	Protocol to the trade and clearing agreement of 17.XII.48. The wheat quota can be increased by 30,000 tons if requested by Austria. The Bulgarian clearing debt of $1.1 on 1.VII.53 to be settled by Austrian reexport of Bulgarian goods.	Swing credit $1.0.
Belgium-Luxembourg						The trade and payments agreement of 21.IV.47 is still valid. Quota lists have, however, not been exchanged for 1954.	Swing credit secret.
Denmark	28.I.54-27.I.55					The trade and payments agreement of 9.V.47 is automatically prolonged for 1-year periods.	Swing credit $0.1.
Finland	1.I.54-31.XII.54 (Signed 25.I.54)	2.0	Wheat (3,000), tobacco (200), onions (1,000), fruit ($0.4), tomato puree (100), other food, chemicals, textiles, gypsum (2,000).	2.0	Machinery (0.3), electric power plants, metal products, pulp (1,000), newsprint, other paper (2,500), prefabricated houses, rayon.		Clearing agreement of 6.X.48. Swing credit $0.5.
France	(Signed 19. III. 54)	4.3	Maize, tobacco, rose oil.	4.3	Breeding cattle, seeds, iron and steel, chemicals, textiles.	This agreement will not be put into effect until the question of Bulgarian debts has been settled.	

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Western Germany	1.I.54-31.III.55 (Signed 27.II.54)	13.0 (15 months)	Wheat, tobacco, and other agricultural products ($10.5), manufactures ($2.3).	13.0 (15 months)	Steel, engineering products, chemicals and other manufactures (together $12.2), transport, services ($0.5).	Protocol to the trade and clearing agreement of 11.XI.47.	A swing credit to be calculated quarterly at 25 percent of transactions (exports or imports, whichever is the lower) during last 12 months, was substituted for the previous swing credit of $2.0.
Greece	5.XII.53-31.XII.54 (Signed 5.XII.53)	1.8	Meat, dried peas, cottonseed, nitrate fertilizers, anthracite, forestry products (including paper).	1.8	Rice, black olives, oranges, lemons, anchovies, cotton, rayon, cotton and woolen fabrics, iron pyrites, manganese ore, superphosphates.	With this trade and clearing agreement, normal trade relations between the 2 countries have been resumed, after several years' interruption.	Swing credit $0.15.
Italy	1.IX.53-31.XII.54 (Signed 1.IX.53)	5.0 (16 months)	Grain, feedingstuffs, oilseeds, tobacco, eggs, poultry, beans, guts, chrome ore.	5.0 (16 months)	Citrus fruit, machinery and spare parts, tubes, ball bearings, apparatus, staple fiber ($1.0), woolen, cotton and hemp yarn and cloth, chemicals, superphosphates, copper sulfate, rubber goods.	This trade and clearing agreement, tacitly renewable for 1-year periods, replaces the agreement of 5.XI.47.	Swing credit $0.2.
Netherlands						The trade and clearing agreement of 4.VI.47 is automatically prolonged for 1-year periods, the latest being 1.I.54-31.XII.54. The quota lists are, however, no longer valid. Trade is conducted only in the form of incidental transactions.	
Norway						There is no trade agreement between the 2 countries. Trade is conducted exclusively in the form of private barter, on the Norwegian side by Norsk Kompensasjonsselskap A/S.	

Sweden						The trade and clearing agreement of 22.IX.47 is still in force, but the quota lists are not valid. Trade is conducted only in the form of private barter, including a global compensation arrangement covering exchanges worth $1.8.	
Switzerland						The trade and clearing agreement of 4.XII.46 is still in force, but quota lists have not been exchanged for several years.	
Turkey						The clearing agreement signed 27.III.42 has been extended until 15.IV.55. Trade is, however, conducted exclusively in the form of private compensation transactions.	
United Kingdom						There is no trade agreement in force, but informal discussions on trade have been conducted between officials of both countries during the past year.	
Czechoslovakia— Austria	1.I.54-31.XII.54. (Signed 17.II.54)	12.0	Sugar (7,000), miscellaneous agricultural products, coal (240,000 and $1.0), charcoal, china clay, refractory clays (20,000), glass (115,000 m²), motor vehicles and spares, and machinery.	12.0	Meat, apples (1,000), fertilizers ($1.5), iron ore, magnesite, pig iron (3,000), high-quality steel ($2.8), rolled steel ($0.5), ball bearings ($0.5), machinery, electrical apparatus, chemicals, rayon, textiles.	Protocol to the trade and clearing agreement of 29.X.48. In contrast to earlier years, Austria does not need to pay a part (last year, 15 percent) of the imports of gas coal in dollars or other free currencies.	Swing credit $3.5.
Belgium-Luxembourg	1.I.54-31.XII.54. (Signed 22.XII.53)	11.0	Malting barley (7,500), malt (12,000), hops, beer (2,000 hl.), furs, coal-tar pitch (10,000), pitprops (10,000 m³), sawn wood (20,000 m³), wood products, paper, pulp (1,000), machinery, passenger cars, tractors, engines for motorcycles, chemicals, ceramics, rubber shoes, textiles, cameras.	11.0	Fresh fish, agricultural products, metallurgical coke, iron and steel, lead (750), machinery, chemicals and pharmaceutical products, photographic products, rayon (700), flax, tanning materials, leather, textiles.	This agreement replaces that of 30.IX.52.	Payments agreement of 3.IV.46. Swing credit secret.

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Denmark	1.VI.54–31.V.55 (Signed 25.VI.54)	3.6	Kaolin (1,000), refractory clay (800), iron and steel, machinery, tractors, motor vehicles, beer bottles, glass- and china-ware, textiles, other consumer goods.	3.3	Butter, chese, milk powder, lard, meat, fish, machinery, ship repairs, pharmaceuticals.	This agreement replaces that of 23.IV.53.	New payments agreement, valid for period 23.IV.54–31.V.55, signed 25.VI.54. Swing credit $1.1 of which half interest bearing.
Finland	1.I.54–31.XII.54	13.9	Sugar, alcoholic beverages, hops (50), kaolin (1,500), chemicals, lubricants, glass products, textiles ($0.5), steel products, machinery, passenger cars, motorcycles, tractors.	3.5	Cheese (1,200), rayon pulp (1,000), wood products, prefabricated houses, paper, hides, copper, ilmenite concentrates (3,500), machinery for forestry industries.	The Czechoslovak export surplus is compensated by Finnish deliveries to the U. S. S. R. under a triangular arrangement.	Clearing agreement of 1.VI.46. Swing credit secret.
France	1.IV.54–31.III.55 (Signed 7.V.54)	13.2	Sawn softwood, wood pulp, coal pitch, various manufactures.	10.8	Cocoa beans, textile materials, phosphates, iron ore, various manufactures.	Exchanges expected to increase by 28 percent over previous period.	Clearing agreement of 29.VII.46 Swing credit $5.0
Western Germany	1.I.54–31.XII.54 (Signed 2.III.54)	19.5		17.5			Clearing agreement of 5.IX.47. Swing credit $5.6.
Greece	1.I.54–31.XII.54 (Signed 1.II.54)	5.0	Sugar, malt, hops, seed potatoes, sawn wood, pulp, paper, machinery, tractors, passenger cars, motorcycles, tools, textiles, glass- and china-ware.	3.8	Citrus fruit (7,000), dried fruit, rice (1,500), wine, tobacco, lead (500), iron ore (30,000), nickel and manganese ores.	This new trade and clearing agreement replaces that of 30.VII.47. The difference is covered by an old clearing debt from 1947 and by freights.	Swing credit $0.4.
Iceland	1.IX.53–15.IX.54 (Signed 31.VIII.53)	1.8	Sugar, hops, machinery, instruments, passenger cars, motorcycles, tires, glass, porcelain, textiles, shoes.	1.8	Frozen fish (5,200), salted herrings (5,000 barrels), wool, sheep skins.		Swing credit $0.7.
Italy						Trade is conducted within the framework of the trade agreement of 1947 in the form of compensation arrangements, including global. The last of these was conducted in June 1954 and covered Czech exports of timber, pulp, telephone poles, machine	Accounting unit: United States dollars. Exchange rate agreed on by the parties for each transaction.

						tools (for reexport), and kaolin to a value of $0.8 million against hides (of which Argentine hides worth $0.5 million).	
Netherlands	I.II.54-31. I. 55 (Signed 13.II.54)	11.6	Malting barley, malt (5,000), hops, seeds, sawn softwood (50,000 m³), cellulose, paper, matches, kaolin (3,000), fireproof clay (5,000), ceramics, glass (1,000), glassware, machinery, motorcycles, passenger cars, textiles.	11.6	Fish (3,000), butter, lard, meat (1,000), green peas, seeds, flax (1,000), textile waste and rags (1,700), yarn, chemical and pharmaceutical products, electrical and other machinery and apparatus.	Protocol to the trade agreement of 7.VII.49. Exchanges expected to be higher than during the previous period.	Payments agreement of 15.XI.46.
Norway	I.I.54–31.XII.54. (Signed 19.III.54)	7.4	Sugar (35,000 tons, in 1953, 17,000), hops, malt, malting barley, cement (5,000), kaolin (800), fireproof clay (1,500), passenger cars ($0.7), motorcycles ($0.4), musical instruments, rubber shoes, textiles ($1.1), chinaware, glassware, office equipment, coke pitch (5,000).	6.3	Marine fats and oils (9,000 tons), fresh, salted and frozen herring (10,500), frozen fish fillets (400), other fish (2,500), paper, iron ore (30,000), pig iron (1,000), aluminum (250), ferroalloys (3,000), sports goods.	Protocol to the trade agreement of 20.III.47. The difference will be covered by freights, etc.	New payments agreement signed 17.XI.53. The swing credit was reduced from $2.3 to $1.0.
Sweden						After the expiry of the quota lists 30.IV.53, trade has been conducted on the basis of compensation transactions wherein the Swedish Government has permitted exports to only 50 percent of the value of imports from Czechoslovakia, in order to reduce the Czech clearing debt, which, according to Swedish sources, amounted to $4.0 in October 1953.	
Switzerland	I.IV.54–31.III.55.	16.0	Sugar, malt, motor vehicles, textiles, glassware, porcelain.	13.0	Metals, machinery, dyestuffs, chemicals, pharmaceuticals.	The difference to be used for Czech indemnity payments in respect of nationalized property according to the 1948 agreement; and for repayment of various trade credits. (Czechoslovakia is no longer ready to supply coal and coke; and exports of iron and steel will be very small.)	Clearing agreement of 22.XII.49. Swing credit $2.3.

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Turkey	I. VII.53-30.VI.54		Iron and steel, steel products, machinery, motor vehicles, wood products, paper, window glass, glass- and china-ware, rubber products, cotton yarn, textiles, linoleum, paints, scientific instruments.		Rice, vegetables, citrus fruit, dried fruit, wax, oilseeds, tobacco, cotton, hides.	The trade and payments agreement signed 9.VII.49 is in force until 30.VI.54.	Swing credit $1.5.
United Kingdom	1.VII.53-30.VI.54 (Signed 16.IX.53)	35	Sugar, bristles, forestry products, textiles, and apparel.	4.2	Machinery, textiles	The 5-year agreement will expire 30.VI.54.	Czechoslovakia is a member of the sterling transferable account group.
Eastern Germany—Austria	1.I.54-31.XII.54 (Signed 18.XII.53)	18.0	Brown-coal briquettes ($2.1), machinery for building trade, etc. ($6.9), office machinery, textile machines and other industrial equipment, vehicles, optical and precision instruments ($2.0), chemicals ($2.1), potash.	18.1	Cheese, fruit, beer, wine, chocolate (together $0.65), iron and steel ($5.9), machinery and ball bearings ($1.3), wood products ($0.9), textile raw materials and finished textiles ($3.9), leather and leather goods ($2.0).	This agreement, concluded between chambers of commerce, foresees a great expansion of trade between the 2 countries.	
Belgium-Luxembourg	1.IX.53-31.XII.54 (Signed 15.VIII.53)	12.0	Sugar-beet seed, pitprops, passenger cars and lorries, textile machinery, office machinery, optical instruments, textiles, chemicals, fertilizers.	12.0	Agricultural products (including colonials), rolling-mill products, other steel products, wood, leather and products (including shoes), textiles, chemicals, fertilizers.	Barter agreement between D. I. A. (Deutscher Innen- und Aussenhandel) and Fédération des Industries Belges. In March the quotas which had originally been set at $10.0 were increased to $12.0.	Swing credit $0.3.
Denmark						Trade is conducted exclusively in the form of private compensation arrangements.	

Finland	1.I.54–31.XII.54 (Signed 29.X.53)	16.5	Brown-coal briquettes (30,000), sulfate of sodium, sulfate of ammonium, potash, fertilizers, lorries and passenger cars ($4.0), electric equipment, optical and precision instruments ($0.6), industrial machinery and office equipment ($3.0), photographic materials, textiles, glass.	13.0	Cheese (4,000), sawn wood (2,500 stds.), pitprops (50,000 m³), cellulose (6,000), kraft (5,000) and other paper ($1.2), cardboard (4,000), plywood (2,800 m³), sulfur concentrates (30,000).	The difference will be settled in a triangular arrangement including the U. S. S. R. The agreement provides for an increase of trade over the 1953 level, although in that year 2 additional agreements were signed, the 2d in August, providing for Finnish exports to the value of $2.8 and East German deliveries to a value of $3.3.	Swing credit $3.0.
France	1.I.54–31.XII.54 (Signed 9.XII.53)	4.2	Machinery and spares, calculating machines, optical instruments, motorcycles, glass- and china-ware, chemicals, silk and waste.	4.2	Fruit, cocoa beans, coffee, wine and spirits, vegetable oil, raw wool, fertilizers, caustic soda, veneers and plywood, rolling-mill products, watch parts, wool textiles.		Swing credit $0.3.
Western Germany	1.I.54–31.XII.54 (Signed 18.XII.53)	176	Sugar ($7.1), soya beans ($14.3) of Chinese origin, brown-coal briquettes ($22.6), petroleum products ($12.3), pitprops ($3.6), manufactures, chemicals, textiles ($24.0).	176	Agricultural products ($21.0), fats and oils, potatoes and hops, coke ($3.3), iron and steel products ($25.0), chemicals, textiles ($15.0).	The agreement includes exchanges to the value of $45 left over from the previous year.	Swing credit $11.9.
Greece	23.XII.53–31.XII.54 (Signed 8.XII.53)	6.3	Sugar (3,000), sulfuric acid, ammonia, calcium, salts, machinery ($2.0), glassware, pottery, sawn wood, newsprint, passenger cars ($1.8), optical instruments, textiles.	6.3	Raisins, currants and figs (9,000), citrus fruit (5,000), fruit juice, wine, olive oil, tobacco (2,000), hides, sponges, casings, magnesite, iron pyrites (20,000).	This, the first trade agreement between the 2 countries since the war, was signed by the Bank of Greece and the Deutsche Notenbank. Trade was previously conducted via Western Germany.	Swing credit $0.25.
Iceland	21.XII.53–31.VII.54	0.5	Iron and steel products, sewing machines, electric motors, textiles, glass- and china-ware.	0.5	Frozen fish.	Compensation agreement signed by D. I. A. and the Icelandic Freezing Plants Corp.	
Italy						Trade between the 2 countries is conducted exclusively in the form of private compensation arrangements.	
Netherlands						The trade and payments agreement of 17.IX.49 is still in force. Trade is, however, conducted exclusively in the form of compensation arrangements.	

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Norway	1.I.54–31.XII.54 (Signed 18.XII.53)	8.3	Sugar ($1.5), potassium fertilizers, machinery, passenger cars, optical instruments, glass- and chinaware, textiles.	8.3	Herring and preserved fish ($4.0), oils and fats, pyrites ($1.5), razor blades, sports equipment, chemicals, feldspar.	Clearing agreement between Norsk Kompensasjonsselskap A/S and D. I. A. (Deutsche Innen und Aussenhandel).	Swing credit $1.0.
Sweden	1.I.54–31.XII.54	17.4	Brown-coal briquettes ($1.5), machinery, passenger cars, porcelain and glassware, potassium salt, Glauber-salt, precision apparatus.	17.4	Butter ($3.5), cheese, eggs, fish ($4.7), iron and steel ($2.2), machinery, razor blades, cellulose, paper, tanning extracts.	Clearing agreement between S. U. K. A. B. and D. I. A. The agreement includes backlogs from 1953 of $5.4 and $1.2 respectively.	Swing credit $0.3.
Turkey	1.IV.54–31.III.55 (Signed 22.IV.54)	26.3	Machinery ($16), boilers, diesel and petrol engines, electrical goods, agricultural machinery, products of shipbuilding, precision and optical instruments, motor tires, tools, ironmongery, building materials, fertilizers, chemicals, pharmaceutical products.	26.3	Tobacco, grain (100,000), rice (2,000), cotton-wool, mohair, linen and hemp fabrics, hides and skins, dried fruit (almonds, hazel nuts, raisins, and figs), pulses, lemons, oranges, oil and oilseeds, wine, gut, sponges, farming materials and hand-woven carpets.		Swing credit $2.5.
Hungary—							
Austria	1.IX.53–31.VIII.54 (Signed 9.IX.53)	13.2	Cattle, bread grain (35,000), rice (3,000), oilseeds (5,000), edible oils (2,000), fruit, vegetables and other agricultural products, industrial equipment, hides, chemicals.	12.9	Roundwood, sawn wood (50-, 000 m³), fuel wood (20,000), cellulose (5,000), paper (2,000), staple fiber (1,000), pig iron, iron and steel, tools, machinery, electrical equipment, various engineering products, leather.	Protocol to the trade agreement of 3.VI.48.	Clearing agreement of 11.III.47. Swing credit $2.0
Belgium-Luxembourg						The trade agreement of 18.II.49 renewed without alteration year by year. The quota lists are, however, no longer valid.	Swing credit secret.
Denmark	1.III.54–28.II.55 (Signed 9.II.54)	3.0	Rice, tobacco, fruit, and vegetables, feedingstuffs, machinery, electric bulbs, pharmaceuticals, textiles, clothing.	2.5	Lard, seeds, other agricultural products, fish, rags, machinery, electrical apparatus, pharmaceuticals.	Protocol to the trade agreement of 10.II.51. The difference will be used to reduce the Hungarian swing debt and for ocean freight.	Payments agreement of 24.II.48. Swing credit $0.4.

Finland	1.I.54–31.XII.54 (Signed 2.XII.53)	7.4	Rice (1,500), medical herbs, bitumen (14,000), machinery and electrical appliances ($1.5), motorcycles, cotton fabrics and other textiles ($0.8), pharmaceutical products.	5.3	Roundwood (100,000 m³), sawn wood (10,000 stds.), prefabricated houses, mechanical pulp and cellulose (4,000), newsprint and other paper (1,200), rayon staple fiber (250), ilmenite (400), machinery ($0.6).	The difference will be settled in a triangular agreement with the U. S. S. R.	Swing credit secret.
Western Germany	1.I.54–31.XII.54 (Signed 23.I.54)	21.3	Agricultural products ($16.4)	20.0	Iron and steel ($3.8), electrical and other machinery, passenger cars, coal and coke, chemicals ($3.2), textiles ($2.0), paper.		Clearing agreement of 5.X.47. The previous swing credit of $3.5 has been changed to a quarterly adjusted swing amounting to 25 percent of the transactions during the past 12 months for imports or exports, whichever is lower.
Greece	1.VI.54–1.VI.55 (Signed 6.VI.54)	2.2	Machinery, motor vehicles, textiles, surgical instruments.	2.2	Dried fruit, wine, tobacco, hides.		Swing credit $0.25.
Iceland	1.III.53–28.II.54, and extended to 31.VIII.54 (Signed 6.III.53)	0.3	Preserved fruit and vegetables, vegetable oil, tools, textiles.	0.3	Salted herrings, frozen fish, other fish products, sheep skins.		Swing credit $0.1.
Italy	1.I.54–31.XII.54 (Signed 26.I.54)	10.9	Livestock (12,000 head), poultry (1,600), eggs (1,500), butter, barley (4,000), malt (2,000), sugar (2,000), vegetables, seeds, machine tools, pharmaceutical raw materials.	10.0	Citrus fruit (4,430), wine (20,000 hl.), tobacco ($1.6), hemp (1,250), cork, cellulose, staple fiber (1,200), paper, ball bearings, machine tools, industrial machinery, tractors, automobile parts, sulfur, chemicals, office machines.	Protocol to the trade and clearing agreement of 16.XII.48. The Hungarian export surplus will cover expenditure in Italian ports, transits, etc.	Swing credit $0.7.
Netherlands	1.X.53–30.IX.54 (Signed 20.X.53)	6.0	Livestock (1,000 head), malt (1,000), oilseeds, vegetables, edible oils, rice (1,000), millet (1,000), tobacco, chemical, and pharmaceutical products, industrial materialsand products, textiles.	6.0	Agricultural products, vegetable oils, essential oil, textile waste (3,000), rayon, nonferrous metals, industrial equipment, chemical and pharmaceutical products.	Protocol to trade agreement of 16.III.53.	Clearing agreement of 20.XII.47. Swing credit $1.6
Norway	1.II.54–31.I.55 (Signed 18.III.54)	2.8	Sugar (2,500), fruit, bathtubs, machinery, motorcycles, sewing machines, textiles, and clothing.	2.8	Canned and frozen fish, herring, fats and oils, hides, pitprops (5,000 m³), staple fibers (1,000), ferroalloys, pig iron.	Protocol to trade and payments agreement of 27.VIII.46.	Swing credit $0.2.

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Sweden	1.X.53–30.IX.54 (Signed 17.XI.53)	4.4	Fresh fruit, feathers, paraffin, alkaloids, other pharmaceutical raw materials, metalworking machinery, radio valves, textiles ($1.5).	3.8	Iron ore, ferroalloys, high-grade steel, electricity-resisting material, tools, ball bearings, rags, staple fiber.	Protocol to trade agreement of 26.VII.46. The difference settled by indemnities on Swedish nationalized property in Hungary. Reexports from Sweden of Hungarian goods are permitted.	Clearing agreement of 1.VIII.46. Swing credit of $0.2 accorded to Hungary in 1954.
Switzerland	1.X.53–30.IX.54 (Signed 30.XI.53)	10.9	Livestock, wheat, feedingstuffs, other agricultural products.	10.9	Breeding cattle, tools, machinery, vehicles, dyes, textiles.	The protocol of 28.III.53 prolonged without alteration.	Clearing agreement of 27.VI.50. Swing credit $1.2
Turkey	1.VI.54–31.V.55		Iron and steel products, transport equipment, machinery, rubber products, glass- and china-ware, chemicals, paints, cotton fabrics.		Lemons, tobacco, oilseeds, cotton, hides, boracite.	The trade and payments agreement of 12.V.49 is automatically extended for 1-year periods.	Swing credit $2.0.
United Kingdom						The British embargo on imports from Hungary was lifted in the summer of 1953. Trade talks started in March 1954 (for the first time since 1949), but have so far yielded no result. A complication is the Hungarian debts to the United Kingdom which are estimated at around $75 million.	
Yugoslavia	(Signed 26.V.54)	2.5	Cement, electrodes, spare parts to agricultural machinery, pharmaceutical raw materials.	2.5	Timber, hemp, chemicals	This compensation arrangement is the first direct trade contact between the 2 countries since 1949.	
Poland—Austria	1.IV.54–31.III.55 (Signed 14.V.54)		Coal (1.1 million tons), eggs (15 million), other food, seeds, chemicals.		Rolling-mill products (8,000), high-quality steel, industrial equipment ($4.3), ball bearings, fertilizers (40,000), graphite, magnesite, chemicals, shoes ($0.7), other consumption goods.	Protocol to the trade and clearing agreement of 22.IV.53.	Swing credit $2.5.

Belgium-Luxembourg	1.I.54–31.XII.54. (Signed 11.I.54)	15.4	Oats (20,000), malting barley (50,000), malt (3,000), ham, other food, pulpwood (75,000 m³), sawn wood (50,000 m³), newsprint (4,000), other paper, tractors, chinaware, hides, chemicals, textiles.	15.4	Fish, seeds, hops, fertilizers (Thomas slag and superphosphates), iron and steel, engineering products, electrical cables, paper, rayon, wool, flax, textiles, chemicals, photographic material.	Protocol to the trade and clearing agreement of 13.IV.50. In addition, tropical products from Belgian Congo to a value of $2 will be exchanged for Polish manufactures of an equal value.	Swing credit secret.
Denmark						Previous quota lists expired 28.II.54. Negotiations on new quota lists have so far given no result.	Payments agreement of 14.XII.48. Swing credit $4.0.
Finland	1.I.54–31.XII.54. (Signed 8.XII.53)	26	Sugar (12,000), starch (3,000), coal (1,350,000+350,000), coke, gypsum (135,000), machinery, textiles ($2.0), chemicals and pharmaceuticals, 12 million zinc cups for dry batteries, glass, lorries, and tractors.	14	Cheese, iron ore (30,000), copper (1,820), feldspar (4,000), rayon, pulp (38,000), paper pulp (5,000), paper and cardboard, machinery ($1.5), pine oil (2,000).	Protocol to trade agreement of 5.II.48. The difference covered by deliveries to the U. S. S. R. under a triangular agreement.	Clearing agreement of 12.III.47. Swing credit $3.0.
France	1.X.53–30.IX.54. (Signed 29.X.53)	11.4	Maize (2,000), soya beans (20 000), seeds, coal (200,000), bristles, feathers, pulpwood (30,000 m³), sawn wood (50,000 m³), boxwood, pulp and paper (9,000), chemicals.	11.4	Citrus fruit, coffee, wine and spirits, phosphates (150,000), iron ore (50,000), rolling-mill products (4,000), other steel, engineering products, tires, textiles, chemical and pharmaceutical products, dyestuffs.		Payments agreement of 1.VIII. 46. Swing credit $5.1.
Western Germany	1.VII.53–30.VI.54. (Signed 9.VII.53)					Protocol to trade agreement of 30.VI.49.	
Greece	22.X.53–31.XII.54. (Signed 11.I.54)	3.9	Sugar ($0.7), eggs, coal ($.7), timber, engineering products, glassware, porcelain, paper.	4.1	Citrus fruit, dried fruit, rice, tobacco ($1.0), cotton, iron ore, zinc concentrates, pyrites, cotton yarn, sponges.	The agreement was signed by the Bank of Greece and the National Bank of Poland. The difference to cover Greek clearing deficit.	Swing credit $0.4.
Iceland	1.I.54–31.XII.54. (Signed 27.I.54)		Coal, fruit and vegetables, fruit pulp, fittings and cast-iron pipes, tools, chemicals, china- and glass-ware, textiles.		Fish, fishmeal, salted sheepskins, medicinal cod-liver oil and industrial oils.		
Italy	30.VI.53–30.VI.54. (Signed 19.VI.53)		Coarse grain (30,000), rye (5,000), seed potatoes (5,000), sugar (5,000), eggs (45 million pieces), malt (500), coal (1 million tons), petroleum products, pulpwood (100,000), sawn wood (10,000 m³), pig iron (3,000), steel products, chemicals.		Citrus fruit (6,000), tobacco ($2.0), wine, rice (1,500), other agricultural products, sulfur (3,500), zinc ore (30,000), fluor (6,000), steel products, ball bearings ($2.0), machinery, staple fiber (3,000), tires ($3.0), chemicals, textiles.	Protocol to the trade and clearing agreement of 15. VI.49. The agreement has been prolonged until 31.XII.54, with 50 percent of quotas.	Swing credit $2.0.

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Netherlands						The trade agreement of 20.V.49 is still in force. The quota lists are, however, no longer valid.	Payments agreement of 18.XII.46.
Norway	1.V.54–30.IV.55						Payments agreement of 21.XII.49. Swing credit $1.0.
Spain			Coal (200,000)		Iron ore (300,000)	Barter deal	
Sweden	1.V.54–30.IV.55 (Signed 16.V.54)		Coal (1.5 million tons, in previous agreement 2.2 million tons), sawn hardwood (6,000 m³), electrodes, chemicals ($0.6), textiles.		Fish, iron ore (500,000 tons, in previous agreement 750,000 tons), iron and steel machinery ($2.1), tanning extracts (1,000).		The swing credit was reduced to $2.9; but in order to relieve the present Polish payments difficulties a special credit of $2.9 was granted to be repaid during the year. In the beginning of 1954, the Polish long-term debt amounted to $35 million, of which $16 million was compensation for nationalized property.
Switzerland						The trade agreement of 25.VI.49 has been prolonged until 30.VI.54, but the quota lists expired 30.VI.53. Since 1.VII.53 trade has been conducted only in the form of private compensation arrangements.	Clearing agreement of 1.VII.49. Swing credit $1.7.
Turkey						The trade agreement of 18.VII.48 is in force until 1.VIII.54.	

United Kingdom						The 5-year agreement of 14.I.49 expired at the end of 1953. Negotiations on a new agreement started on Mar. 4, without any result so far.	Poland is a member of the sterling transferable account group.
Rumania—							
Austria	1.IV.54–31.III.55 (Signed 20.III.54)	14.0	Wheat, maize, rye, barley (together 100,000 of a value of $6.9), rice ($1.0), eggs, pulses, oilseeds, fruit and vegetables, feathers, wood ($0.5), petroleum products, chemicals.	14.0	Breeding cattle, magnesite, iron and steel products, machinery, paper, textiles.	Protocol to trade agreement of 12.VII.50.	Payments agreement of 11.IV.50. Swing credit $1.5.
Belgium-Luxembourg						The trade agreement of 3.IX.48 is still in force, but the quota lists are no longer valid.	Swing credit secret.
Denmark	1.IV.54–31.III.55 (Signed 31.III.54)	2.9	Grain ($0.5), oilcakes (10,000), bran, dried fruit, timber, feathers, bristles, tractors, petroleum products, glass, chemicals.	2.9	Malting barley, milk powder, margarine, fats, fish, machinery, sisal yarn, hides, rags.		New payments agreement signed. Swing credit $0.45.
Finland	18.VII.53–31.XII.54 (Signed 18.VII.53)	6.7	Wheat (10,000), tomato puree, petroleum products (430,000) of which fuel oil 400,000 (for resale), hardwood, chemicals, carbon black, wool rags, paraffin, Litumen, medical herbs.	3.7	Cast-iron tubes ($0.8), machinery for forestry industries ($1.0), other machinery ($0.4), kraft and other paper ($0.5), special steel, cables, asbestos.	The difference is settled in a triangular agreement including the U. S. S. R.—this is the 1st postwar trade agreement between the 2 countries.	Payments agreement of 14.III.51. Swing credit secret.
Western Germany	1.I.54–31.XII.54 (Signed 8.II.54)	16.4	Wheat and coarse grain ($3.5), fruit, feedingstuffs, other agricultural products, feathers, timber and products ($4), petroleum and products ($4), chemicals, tires.	16.4	Fish, hops, iron and steel ($6), machinery, engineering products, electrotechnical and chemical products, paper, rayon, cotton yarn, textiles.	This agreement between Ost-Ausschuss and Agroexport is the 1st postwar agreement between the 2 countries.	Clearing agreement for 1954 between the Rhein Main Bank in Frankfurt and the Rumanian State Bank. Swing credit $2.5.
Greece	1.VI.54–31.VI.55 (Signed 19.V.54)		Wood and products, petroleum products, industrial equipment, tractors, chemical and pharmaceutical products.		Citrus fruit, olives, olive oil, spices, tanning material, cotton and sisal yarn, chemical fertilizers.		
Iceland	13.IV.54–31.XII.55 (Signed 13.IV.54)		Grain, preserved fruit, hardwood, petroleum products.		Salted herrings, frozen fish, fish conserves.		Swing credit $0.1.
Italy	20.XII.53–19.XII.54	11.2	Grain, eggs, vegetables, feedingstuffs, timber, coke, petroleum products, chemicals.	11.2	Citrus fruit, industrial equipment, machinery, rayon and staple fibers, textiles, and chemicals.	Protocol to the trade and clearing agreement of 25.XI.50.	Swing credit $0.6.

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
Norway	1.VI.54–31.V.55 (Signed 18.V.54)	2.8	Grain ($0.4), fresh and dried fruit, fruit pulp, feathers, carbon black, petroleum products ($1.4), industrial equipment, tractors.	2.8	Margarine, fish, marine fats and oils, paper and products, staple fiber ($1.2), ferroalloys.	This trade and payments agreement is the 1st between the 2 countries since the war.	Swing credit $0.4.
Sweden						In the absence of a settlement of the Swedish claims for nationalized property, trade is very small.	
Switzerland	1.VIII.53–31.VII.54 (Signed 1.IX.53)	8.7	Grain, fodder, seeds, fuelwood, pulpwood, fuel oil, chemicals.	8.7	Cattle, dyestuffs, chemicals, machinery, watches.	The quota lists under the trade and payments agreement of 3.VIII.51 have been prolonged year by year but have lost their significance.	
Turkey	15.IV.54–14.IV.55 (Signed 5.IV.54)	13.0	Agricultural products, wood and products, prefabricated houses, petroleum products, cement, chemicals, glass, machinery, tractors, textiles.	13.0	Livestock, rice, citrus fruit, dried fruit, olives, eggs, fish, cotton, flax and hemp cuttings, wool and mohair, oilseeds, oilcakes, hides, tobacco.		Swing credit $1.5.
U. S. S. R.—Belgium-Luxembourg	1.I.54–31.XII.54 (Signed 22.I.54)	70	Wheat (50,000), rye (30,000), oats (30,000), barley (60,000), maize (30,000), oilcakes (20,000), crab meat, tobacco (200), caviar, chrome (2,000) and manganese ores (90,000), ferromanganese (10,000), anthracite (60,000), pig iron (30,000), asbestos (5,000), gas oil (100,000), coal-tar pitch (30,000), apatite (50,000), pitprops (50,000 m^3), sawn softwood (200,000 m^3), plywood (5,000 m^3), cellulose (5,000), passenger cars (250) furs, bristles.	70	Herrings (5,000), meat (2,000), fats and oils (8,000), lead (4,000), 20 ships (of which 10 refrigerating), 4 floating cranes, steam boilers, rolled steel (20,000), steel wire (5,000), transformers, electrical cables ($3.8), equipment for light industries ($2.5), chemicals, hides, leather, staple fiber (5,000) and yarn, raw wool and woolen textiles, dyestuffs.	Protocol to the trade and payments agreement of 18.II.48. For certain Belgian exports of a value of $30 (not included in the $70) delivery dates range until 1957.	Swing credit secret. U. S. S. R. assets in Belgium fell from $18 in October 1953 to $9.4 at the end of December.

Denmark	1.VII.53–30.VI.54 (Signed 17.VII.53)	21	Wheat (50,000), oilcakes (70,000), soya beans (30,000), cotton (2,000), sawn wood (25,000 stds), pig iron (7,000), asbestos (2,000), apatite concentrates (20,000).	21	Salted herrings (8,000), butter (10,000, subsequently increased to 20,000 at Dkr. 7.35 per kg., of which the last 5,000 tons to be paid in sterling), lard (6,000), meat (10,000+5,000 settled via the Netherlands), 5 refrigerator ships of 900 gross tons each, equipment for ships, machinery, ship repair.	Protocol to trade and clearing agreement of 8.VII.46. In August 1953, Denmark liberalized imports from the U. S. S. R. to the same extent as from EPU countries. Contracts for 5 ships have been signed. Negotiations for 5 more (valued at $15 million) have started; the counterpart for these will consist chiefly of aize, soya beans, and petroleum.	Swing credit $0.3. U. S. S. R. clearing debt 1.III.54 $8.0.
Finland	1.I.54–31.XII.54 (Signed 25.XI.53)	105	Wheat (180,000, in 1953, 275,000), rye (50,000, in 1953 100,000), other grain (35,000), oilcakes (30,000), fruit and vegetables, sugar (105,000, in 1953 90,000), other food, cotton (9,000), petroleum products (775,000, in 1953 400,000), of which petrol 300,000, fertilizers (200,000), asbestos, chemicals, dyestuffs, ferroalloys, rolling-mill products (100,000), industrial equipment and passenger cars ($7.5), apparatus, steel scrap (50,000), anthracite (100,000), coke and coking coal (200,000), calcinated soda (15,000), sulfur (5,000), manganese ore (30,000), kaolin (5,000), flax (300), furs ($0.5).	147	Butter (500), copper wire (3,000), pulpwood (400,000 m³), sawn wood (280,000 m³), prefabricated houses (750,000 m³), cellulose (rayon pulp 16,000), paper (55,000, in 1953 40,000), cardboard (20,000), staple fiber (4,000), ships and barges (108 units), floating cranes and other transport and hauling equipment, machinery and apparatus for forestry industries (among which a complete pulp and paper mill with 100,000 tons capacity), hydroelectric turbines, powerplant ($7.5), sewing machines (35,000), telephone switchboards (10,000), locomotives (46 of 400 HP), other metal products, ethyl alcohol (6,000).	The difference is settled in triangular agreements with the other eastern European countries (except Bulgaria). The turnover is lower than in 1953 because of lower prices. The price of wheat, for example, was lowered from $110 to $83 a ton.	Clearing agreement of 5.XII.46. The swing credit was increased from $1.5 to $15 in 1954. In a credit agreement of 26.I.54 Finland received a 10-year gold loan of $10 million at 2½ percent interest. In addition, the U. S. S. R. has agreed to pay for part of Finnish exports in 1954 in free currencies. During the period January-April 1954 Finland had an active balance of $9, of which the U. S. S. R. has so far settled $5 in gold.

TABLE XIII.—*Trade agreements between eastern and western European countries*—Continued

[Countries arranged in alphabetical order]

Contracting parties	Quota lists effective for period	Eastern country's exports		Western country's exports		Remarks	Provisions concerning payments
		Value	Main commodities	Value	Main commodities		
France	1.VII.53–30.VI.54 (Signed 15.VII.53) Additional agreement signed 28.I.54.	34	Original quotas: maize (65,000), crab meat, caviar, essential oils, anthracite (200,000), coal tar (80,000), crude petroleum (400,000), chrome and manganese ore (35,000), sawn wood (75,000 m³), asbestos (6,000). Additional quotas: anthracite (90,000), sawn wood (75,000 m³), manganese ore (30,000), chemical pulp (10,000), raw cotton (7,000), furs, platinum (400 kgs.).	34	Citrus fruit, cocoa, cork (3,000), lead (3,000), iron and steel (100,000), 6 ships of 5,000 gross tons each, 200 cranes of 5–10 tons, railway material, woolen and rayon textiles.	This agreement is valid until 30.VI.56. Part of the French exports is to be delivered during the 2d and 3d years of the agreement. The U. S. S. R. had by the end of 1953 already signed contracts for $30 million. Mixed commission agreed on additional export quotas for the U. S. S. R. since some other quotas (for example, maize) were not utilized.	Swing credit unknown.
Greece	28.VII.53–28.VII.54 (Signed 28.VII.53)	10	Anthracite (10,000), petroleum products (300,000), sawn wood (45,000 m³).	10	Rice (500), spices, olive oil, tobacco (5,000), cotton (1,000), sponges.		Swing credit $1.0.
Italy	27.X.53–26.X.54 (Signed 27.X.53)	30	Wheat (100,000), crab meat, oilcakes (10,000), essential oils, tobacco, asbestos (3,000), turpentine, furs ($1.0), bristles, anthracite (100,000), crude petroleum (200,000), fuel oil (100,000), chrome ore (15,000), manganese ore (25,000), sawn wood (100,000 m³), paraffin (3,000). In addition the U. S. S. R. has agreed to export raw cotton ($5.5), and crude petroleum (350,000), in order to work down the clearing debt.	28	Citrus fruit (20,000), almonds (1,000), tobacco, cork, rayon (2,000), essential oils, 3 freighters of 5,000 gross tons and 3 refrigerator ships of 1,200 tons, 15 tugboats, cranes, equipment for power stations, electrical cables, other industrial equipment, textile machinery ($1.0), machinery for food-processing industries, woolen and rayon goods.	Protocol to the trade and clearing agreement of 11.XII.48. In addition to the new wheat quota, Italy will receive 25,000 tons in exchange for goods already shipped (see clearing balance).	Swing credit $1.0. U. S. S. R. clearing debt at end of 1953 $21 million.
Netherlands	1.I.54–31.XII.54 (Signed 28.IV.54)		Wheat (60–120,000), other grain (50,000) canned fish, tobacco, pig casings, raw cotton (8,000), pitprops (40,000m³), sawn timber (210,000m³), plywood, cellulose (5,000), anthracite		Salted herrings (15,000), butter (15,000) cheese (3,000), animal fat (5,000), meat (10,000), spices, leather, staple fiber (2,000), ships (of which 3 cargo of 6,500 tons each and 14 refriger-	Protocol to the trade and payments agreement of 2.VII.48.	Clearing agreement of 11.XII.48. Swing credit $1.0.

			(50,000), kola phosphates (40,000), coal-tar pitch (25,000), gas oil (40,000), turpentine oil, furs, essential oils, dyestuffs, manganese ore (40,000), motorcars and spares.		ator ships of 2,000 tons each, 5 big dredgers, ship repairs, pharmaceuticals (including thiobromine, quinine, and cocaine).		
Norway	1.I.54–31.XII.54 (Signed 25.I.54).	28	Wheat (75,000) rye (30,000), fodder (45,000), crude phosphates (20,000), manganese (30,000) and chrome ores (7,500), motorcars (2,000 units) and spares.	28	Salted (46,000) and frozen (10,000) fish, rayon (1,000), hardened fat (25,000), aluminium (2,000).	Protocol to the trade and clearing agreement of 1.I.47. Previous quota lists covered exchanges of $17.5, but in October an additional agreement for exchanges of $6 was signed.	Swing credit $1.0.
Sweden	1.I.54–31.XII.54 (Signed 3.II.54).	30–40	Maize (10,000), oilcakes (30,000), tobacco, cotton, petroleum and products (600,000), chrome ore (20,000), manganese ore (15,000), silver, toluol, paraffin, benzol, anthracite.	30–40	Herrings (2,000), butter (5,000), paper and cardboard (10,000), staple fiber (5,000), iron and steel, 20 fishing trawlers (of 1,200 gross tons each), and 5 small refrigerating ships to be delivered 1954–56, steel, industrial equipment, electrical machinery and apparatus, razor blades.	Protocol to the trade and clearing agreement of 7.X.46. A doubling of trade compared to 1953 is foreseen.	The U. S. S. R. long-term debt 31.XII.53 $107 of which $3.1 utilized in 1953.
Switzerland						The trade and clearing agreement of 17.III.48 is still valid, but the quota lists (providing for exchanges worth $20 million) have lost their significance. Trade is now conducted exclusively in the form of private barter transactions.	No swing credit.
Turkey						The trade and clearing agreement of 8.X.37 is still valid. The U. S. S. R. previously bought Turkish goods via Bulgaria. Direct imports of tobacco (2,000), cotton (10,000) and other commodities have, however, recently taken place.	
Iceland	1.VII.54–31.XII.55 (Signed 19.VI.54.)		Rye meal (4,000), wheat bran (3,000), rice (1,000), potato flour (600), wheat flour (4,000), maize (5,000), cement (75,000), steel tubes (2,000), merchant iron (2,000), coke (1,700), anthracite (1,100), petroleum products (355,000).		Frozen fish (30,000), salted herring (15,000), frozen herring (2,000).		

TABLE XIV–A.—*Regional distribution of Soviet production and consumption of all iron and steel products, 1938*

[In percent of U. S. S. R. totals]

Region	Pig iron and ferro alloys		Ordinary rolled		Quality rolled		Steel pipe		Iron pipe	
	Share of production	Share of consumption	Share of production	Share of consumption	Share of production	Share of consumption	Share of production	Share of consumption	Share of production	Share of consumption
European, north	.....	2.7	2.2	8.4	5.7	10.0	9.6	11.1	3.3	13.7
Center and west (including upper Volga)	7.6	9.6	5.8	24.2	23.5	45.6	9.9	23.9	26.9	37.0
South	66.1	57.4	62.9	41.1	20.0	12.6	74.5	31.7	52.8	24.1
Urals and lower Volga	16.2	20.2	19.1	14.3	49.2	29.2	6.0	9.9	17.0	14.0
Siberia	10.1	9.4	9.9	5.2	1.6	0.2	.....	0.9	.....	2.0
Miscellaneous regions	.....	0.7	0.1	6.8	.....	2.4	.....	[1] 22.5	.....	11.2

Source: Clark, M. Gardner. Studies in the Soviet Iron & Steel Industry, unpub.

[1] Of the 22.5 percent of steel pipe in miscellaneous regions, most of it, or 18.8 percent, was consumed in Trans-Caucasia, site of the Soviet oil industry.

TABLE XIV–B.—*Production of crude steel*

[In thousands of metric tons]

Country	Actual [1]				Planned [2]	
	1929	1949	1952	1953	1953	1960
WESTERN EUROPE						
ECSC:						
Belgo/Luxembourg Economic Union	6,814	6,138	8,100	7,190	8,700	9,100
Belgium	(4,109)	(3,866)	(5,098)	(4,531)	(5,500)	(5,700)
Luxembourg	(2,705)	(2,272)	(3,002)	(2,659)	(3,200)	(3,400)
France and Saar	11,920	10,909	13,690	12,688	15,500	21,000
Western Germany	[3] 14,800	9,156	15,806	15,417	18,000	21,000
Italy	2,122	2,055	3,535	3,498	3,500	4,000
Netherlands	(3)	428	685	868	850	900
Subtotal	[3] 35,656	28,686	41,816	39,661	46,550	56,000
Others:						
Austria	632	835	1,057	[3] 1,250	1,300	1,300
Spain	1,004	720	907	[3] 900	1,000	2,000
Sweden	[3] 700	1,391	1,689	[3] 1,725	2,050	2,050
United Kingdom	9,790	15,803	16,681	17,892	17,800	21,000
Yugoslavia	97	401	445	[3] 500	500	760
Small producers [4]	[3] 28	514	778	[3] 800	805	1,440
Subtotal	[3] 12,251	19,664	21,557	[3] 23,067	23,455	28,550
Total	[3] 47,907	48,350	63,373	[3] 62,717	70,005	84,550
EASTERN EUROPE						
Czechoslovakia	2,080	2,762	[3] 3,577	[3] 4,200	4,100	5,400
Eastern Germany	[3] 900	603	1,893	[3] 2,200	[3] 2,350	3,100
Hungary	513	849	[3] 1,396	[3] 1,600	1,800	2,200
Poland	[3] 1,910	2,303	3,183	[3] 3,600	3,750	5,000
Romania	161	459	698	750	850	1,250
Total	[3] 5,564	6,976	10,747	[3] 12,350	12,850	16,950
Total Europe	[3] 53,471	55,326	74,120	[3] 75,067	82,855	101,500
U. S. S. R.	5,003	23,300	34,500	38,000	38,000	60,000
United States	57,336	70,742	84,511	102,000	108,000	117,000

[1] Quarterly Bulletin of Steel Statistics for Europe, ECE, Geneva, September 1953.
[2] For full sources see appendix 1, the European Steel Market in 1953, Geneva 1954.
[3] Data estimated by the Secretariat of the Economic Commission for Europe.
[4] Denmark, Finland, Greece, Norway, Switzerland, and Turkey.

TABLE XIV–C.—*Pattern of raw-material consumption*

[In thousands of metric tons and percentages]

Country	Year	Pig iron		Crude steel			Coke consumption per ton of iron (kg)
		Production	Percent scrap	Production	Percent converter steel	Pig iron-scrap ratio	
ECSC:							
Belgium (Luxembourg)	1936–38	5,147	7.0	5,097	91	98–13	1,020
	1949	6,121	21.2	6,138	90	98–13	900
	1950	6,194	21.6	6,240	91	98–13	896
	1951	8,007	23.9	8,168	89	97–14	915
	1952	7,851	20.5	8,100	89	95–15	936
	[1] 1953	6,938	12.2	7,190	89	95–14	987
France (Saar)	1936–38	8,963	9.6	9,354	68	82–29	1,031
	1949	9,927	16.3	10,909	65	78–30	1,041
	1950	9,445	18.0	10,550	66	77–31	982
	1951	11,120	12.5	12,438	63	76–33	1,024
	1952	12,319	11.8	13,690	64	76–32	1,029
	[1] 1953	11,063	10.5	12,688	65	76–31	1,023
Western Germany	[2] 1936–38	14,155	5.6	18,135	37	72–38	1,008
	1949	7,140	23.8	9,156	45	66–43	984
	1950	9,473	21.4	12,121	42	63–45	947
	1951	10,697	13.9	13,506	43	64–44	983
	1952	12,877	12.5	15,806	45	67–42	1,031
	[1] 1953	11,655	11.4	15,417	41	65–44	1,013
Italy [3]	1936–38	800	1.3	2,145	----------	35–75	869
	1949	393	2.5	2,053	----------	20–90	756
	1950	504	2.6	2,362	----------	20–90	683
	1951	953	3.6	3,063	1	23–86	652
	1952	1,100	3.5	3,335	6	28–82	667
	[1] 1953	1,222	3.2	3,498	7	27–83	659
Netherlands	1936–38	285	----------	44	----------	47–63	1,050
	1949	434	4.6	428	----------	21–95	1,175
	1950	454	9.3	490	----------	21–96	1,156
	1951	524	4.4	553	----------	29–88	1,073
	1952	539	4.3	685	----------	31–84	1,080
	[1] 1953	595	3.5	868	----------	34–77	1,054
Total, ECSC countries	1936–38	29,350	6.9	34,775	51	76–34	1,013
	1949	24,015	19.3	28,684	58	73–36	973
	1950	26,070	19.7	31,763	56	71–38	946
	1951	31,301	15.5	37,728	56	71–38	972
	1952	34,686	13.7	41,816	56	72–37	998
	[1] 1953	31,473	10.8	39,661	54	70–39	1,002
Others:							
Austria	1936–38	396	[4] 1.4	579	----------	[4] 54–50	785
	1949	838	4.3	835	----------	51–52	779
	1950	883	5.1	943	----------	51–52	800
	1951	1,049	1.2	1,028	----------	54–49	777
	1952	1,173	2.1	1,057	1	51–50	771
	[1] 1953	1,300	1.9	1,250	27	58–46	760
Spain	1936–38	265	----------	371	18	[5] 69–41	[5] 1,414
	1949	616	----------	720	21	68–46	1,185
	1950	658	----------	815	23	68–46	1,185
	1951	654	----------	818	21	63–50	1,165
	1952	768	----------	907	22	66–44	1,219
	[1] 1953	790	----------	900	22	63–50	1,202
Sweden	1936–38	635	0.9	1,033	11	47–59	332
	1949	811	1.8	1,391	12	43–64	432
	1950	785	1.3	1,456	10	41–66	459
	1951	851	2.0	1,525	11	40–65	555
	1952	1,052	1.0	1,689	9	46–61	[6] 614
	[1] 1953	1,020	1.1	1,725	12	47–60	[6] 581
United Kingdom	1936–38	7,781	3.9	11,910	5	47–59	1,132
	1949	9,651	8.4	15,803	7	45–63	1,051
	1950	8,787	9.4	16,554	7	46–63	1,027
	1951	9,824	8.5	15,889	7	50–58	1,063
	1952	10,900	7.0	16,681	7	53–55	1,070
	[1] 1953	11,354	6.8	17,892	6	53–55	1,068

See footnotes at end of table.

TABLE XIV–C.—*Pattern of raw-material consumption*—Continued

Country	Year	Pig iron		Crude steel			Coke consumption per ton of iron (kg)
		Production	Percent scrap	Production	Percent converter steel	Pig iron–scrap ratio	
All other [7]	1936–38	98	9.2	338	----------	36–73	827
	1949	536	17.4	915	----------	37–74	815
	1950	544	18.9	978	----------	36–73	842
	1951	630	14.8	1,119	----------	39–68	878
	1952	699	18.0	1,220	----------	38–72	914
	[1] 1953	730	15.3	1,300	----------	37–73	834
Total non-ECSC countries	1936–38	9,175	[8] 3.7	14,231	6	48–58	1,066
	1949	12,452	[8] 8.0	19,664	7	46–62	989
	1950	12,657	[8] 9.0	20,746	7	46–62	977
	1951	13,008	[8] 7.7	20,379	7	49–59	1,003
	1952	14,592	[8] 6.7	21,554	7	52–56	1,013
	[1] 1953	15,194	[8] 6.4	23,067	8	52–56	999

[1] Estimated by the United Nations Secretariat.
[2] Germany within the 1937 borders, but excluding the Saar shown under France.
[3] The Italian coke consumption figures mainly reflect changes in the relative importance of electric pig iron compared to total pig iron.
[4] 1936–37.
[5] 1937–38.
[6] Including coke breeze. The Swedish coke consumption figures mainly reflect the changes in the relative importance of electric plus charcoal pig iron compared to total pig iron.
[7] Denmark, Finland, Greece, Norway, Switzerland, Yugoslavia, Turkey.
[8] Excluding Spain.

Source: United Nations, Economic Commission for Europe. The European Steel Market in 1953, Geneva, January 1954.

TABLE XIV–D.—*Production of pig iron, steel, and rolled products, Soviet Union, 1940–53*

[In millions of tons]

Year	Pig iron		Steel		Rolled products	
	Percent of previous year	Tonnage	Percent of previous year	Tonnage	Percent of previous year	Tonnage
1940	----------	14.9	----------	18.3	----------	13.1
1941 plan	----------	18.0	----------	22.4	----------	15.8
1942	[1]	4.8	[1]	[1]	[1]	[1]
1943	[2] 117	5.6	[1]	8.5	[1]	5.6
1944	[3] 131	7.4	[3] 129	10.6	[3] 128	7.2
1945	[4] 121	8.9	[4] 115.6	12.3	[4] 118	8.4
1946	[5] 11.2	10.0	[6] 109	13.4	[6] 113	9.6
1947	[7] 114	11.3	[6] 109	14.6	[6] 115	11.0
1948	[7] 122	13.9	[8] 128	18.6	[8] 218	14.1
1949	[9] 119	16.5	[9] 125	23.3	[9] 127	17.9
1950	[10] 117	19.3	[10] 117	27.3	[10] 116	20.8
1951	[11] 114	22.0	[11] 115	31.4	[11] 115	23.9
1952	[12] 114	25.1	[12] 110	34.5	[12] 112	26.8
1953	[13] 109	27.4	[13] 110	38.0	[13] 110	29.5
1955 plan [14]	----------	34.0	----------	44.2	----------	34.1

[1] Not available.
[2] Voznesenskii, Voennaia ekonomika SSSR, p. 142.
[3] Buzyrev, Vosstanovitel'nye raboty i ikh finansirovanie, p. 24.
[4] Pravda, Feb. 17, 1946.
[5] Stal', 1947, No. 8, p. 675.
[6] Plan, Khoz., 1948, No. 5, p. 5.
[7] Trud, Feb. 4, 1949.
[8] Trud, Jan. 20, 1949.
[9] Plan, Khoz., 1950, No. 1, p. 4.
[10] Voprosy Ekonomiki, 1950, No. 6, p. 30.
[11] Plan, Khoz., 1952, No. 1, pp. 1 ff.
[12] Pravda, Feb. 24, 1953, gave 25, 35, and 27 million tons. Pravda, Jan. 23, 1953, gave the percentages.
[13] Pravda, Jan. 31, 1954. These figures check with Khrushchev's statement that in 1953 the U. S. S. R. produced 15 million more tons of steel than 4 years previously, and over 11 million more rolled metal, which was 2.2 times as much as in 1940 (Pravda, Mar. 7, 1954).
[14] The plan calls for the following increases in 1955 over 1950: Pig iron, 76 percent; steel, 62 percent; rolled metal, 64 percent. See Pravda, Aug. 20, 1952.

Source: Clark, M. Gardner. *Studies in the Soviet Iron and Steel Industry*, unpublished.

This table was computed by working backward from the 1950 figures. The latter were given in terms of the 1940 figures by Pravda, April 17, 1951. The degree of confidence to be placed in this table is discussed in chapters 18 and 19. The figures are consistent with the statement by Pervukhin that in the first 2 years of the fifth 5-year plan 2.4 times as much steel would be produced as in the first 2 years of the fourth 5-year plan (Pravda, Nov. 7, 1952). It also checks with Malenkov's statement that from 1949 to 1951 pig iron increased some 8 million tons, steel 13 million, and rolled metal 10 million (Pravda, Oct. 6, 1952), with the announcement that 1952 output would exceed 1940 by 70 percent in pig iron, 90 percent in steel, and over 100 percent in rolled products (Plan, Khoz., 1952, No. 6, p. 37), and with Mikhailov's statement that 1951 production exceeded 1950 by 2.7 million tons of pig iron, about 4 million tons of steel, and about 3 million tons of rolled metal (U. S. S. R. Information Bulletin, Feb. 11, 1952, p. 68).

Because Voznesenskii expressed output for the eastern regions during the Second World War in terms of "common units" of pig iron, steel, and rolled products, several observers have suspected that the production statistics for other regions and for the U. S. S. R. in other years might also have been expressed in "common units," without indicating the fact. We consider this possibility extremely unlikely. In the first place, it is perfectly clear that this was not the practice before the Second World War. In chapter 19 we described the conversion coefficients for different types of pig iron and steel and showed how they were used for certain clearly defined purposes in planning new capacity and in comparing the productivity of furnaces producing different types of iron and steel. We have clear evidence that common units were not used in 1933 (see Strumilin, S. G., Chernaia Metallurgiia v Rossii v S. S. S. R. Tekhnicheskii Progress za 300 Let. (Iron and Steel in Russia and the U. S. S. R. Technical Progress for 300 years). Moscow-Leningrad: Izdat. Akad. Nauk S. S. S. R. 1935, pp. 302–308) nor in 1938 (Shul'kin, L. R., compiler. Potreblenie Chernykh Metallov v S. S. S. R. (Consumption of Iron and Steel in the U. S. S. R.). Moscow-Leningrad: Metallurgizdat, 1940), nor in the 1941 plan (pp. 17–27). Similar evidence for other prewar years could doubtless be found.

In the second place, the reason that Voznesenskii used common units to compare wartime production with 1940 is perfectly clear. The increase in the share of ferroalloys in pig-iron production, of alloyed and high quality steel in steel-ingot and rolled-product production would tend to overstate wartime production in common, compared to natural, units. On the other hand, it is equally clear that the fourth 5-year plan (1946–50) called for a reduction in the share of alloy and quality products. Furthermore, we know that this actually occurred on a large scale during 1946 and 1947, and probably through 1949. Therefore the use of common units would have understated Soviet achievements in those years, something which Soviet statisticians have never been known to do. Of course, the increase in the production of high-grade products since 1950 would tend to inflate statistics in common units again, but it is unlikely that even Soviet statisticians would shift definitions from month to month, without, at least, giving some indication in the technical and economic press. This behavior would also show up in the form of internal inconsistencies, which should be relatively easy to spot.

Finally, our test of consistency made in chapter 19 clearly indicates that the Soviet practice of using common units to express productivity and natural units to express total output has continued through 1948.

TABLE XIV–E.—*Apparent consumption of crude steel*

[In thousands of metric tons]

Country	Apparent consumption			Per capita consumption in 1953 [1] (in kg)
	1929	1953 [1]	1953 as percent of 1929 [1]	
WESTERN EUROPE				
ECSC:				
Belgium-Luxembourg	2,090	2,150	103	237
France-Saar	8,320	8,600	103	197
Western Germany	[1] 10,390	14,700	141	288
Italy	2,423	4,000	165	85
Netherlands	1,199	2,050	171	195
Subtotal	[1] 24,422	31,500	129	195
Others:				
Austria	635	900	142	129
Spain	1,100	950	86	33
Sweden	896	2,200	246	306
United Kingdom	8,508	16,350	192	323
Yugoslavia	226	600	265	36
Small consumers [2]	1,980	3,100	156	53
Subtotal	13,345	24,100	181	143
Total	[1] 37,767	55,600	147	169
EASTERN EUROPE [3]				
Bulgaria	77	263	342	36
Czechoslovakia	1,535	3,650	238	288
Eastern Germany	[1] 2,020	2,738	136	147
Hungary	383	1,487	388	157
Poland	[1] 1,790	3,462	193	133
Rumania	245	1,213	495	73
Total	[1] 6,050	12,813	212	141
Total Europe	43,817	68,413	156	163
U. S. S. R.	5,377	38,600	718	187
United States	53,100	101,200	191	634

[1] Estimated by the United Nations Secretariat.
[2] Denmark, Finland, Greece, Iceland, Ireland, Norway, Portugal, Switzerland, and Turkey.
[3] These estimates are subject to a very considerable margin of error.

NOTE.—For methods used see appendix II, The European Steel Market in 1953, ECE 1954.

TABLE XIV–F.—*Apparent consumption (actual tonnages and per capita consumption) and production of crude steel in 1953 compared to 1929*

[Index: 1929=100]

Country	Apparent consumption [1]		Production [1] (actual tonnages compared)
	Actual tonnages compared	Per capita consumptions compared	
WESTERN EUROPE			
ECSC:			
Belgium-Luxembourg	103	94	106
France-Saar	103	99	106
Western Germany	141	109	104
Italy	165	139	165
Netherlands	171	127	8
Subtotal	129	109	111
Others:			
Austria	142	138	198
Spain	86	70	90
Sweden	246	209	246
United Kingdom	192	173	183
Yugoavslia	265	226	515
Small consumers [2]	157	119	2,857
Subtotal	181	150	188
Total	147	124	131
EASTERN EUROPE			
Bulgaria	[3] 342	[3] 284	[4] 8
Czechoslovakia	238	260	202
Eastern Germany	136	113	244
Hungary	388	354	312
Poland	193	215	188
Rumania	495	403	466
Total	212	202	222
Total Europe	156	135	140
U. S. S. R	718	614	760
United States	191	146	178

[1] Estimated by the United Nations Secretariat.
[2] Denmark, Finland, Greece, Iceland, Ireland, Norway, Portugal, Switzerland, and Turkey.
[3] These estimates are subject to a very considerable margin of error.
[4] Bulgaria's 1st steel furnace, producing some 10,000 tons annually, is reported to have been put into operation toward the end of 1953.

NOTE.—For methods of calculation used see appendix II, *The European Steel Market in 1953*, ECE 1954.

TABLE XV.—*Demographic, Social, and Labor Force Data for Selected Countries or Political Units*

Data	Albania	Bulgaria	Czechoslovakia	Hungary	Poland	East Germany	Rumania	U. S. S. R.
Total population:								
1938	1,048,000	6,544,000	14,606,000	9,156,000	[18] 32,100,000	[4]	[15] 15,682,000	[3] 188,184,000
1948	1,175,000	[3] 7,132,000	12,244,000	9,168,000	23,845,000	[3] 19,047,000	[3] 15,982,000	[31] 205,000,000
1952	[3] 1,251,000	[3] 7,423,000	12,656,000	[3] 9,474,000	[3] 25,735,000	[3] 18,389,000	[3] 16,703,000	
Births per 1,000 population:								
1938	34.5	[5] 22.8	[5] 16.7	[15] 19.9	[15] 24.3	[23] 19.0	[15] 22.6	38.3
1948	[3] 35.6	25.2	23.6	[3] 19.1	29.4	12.7	[3] 25.8	[3] 27.2
1952	[3] 36.8	28.7	22.1	19.7	[3] 30.7	[3] 14.9	[3] 29.2	
Deaths per 1,000 population:								
1938	17.7	[5] 13.7	[5] 13.2	[15] 14.3	[16] 13.7	[23] 12.2	19.2	[32] 19.4
1948	[3] 20.2	13.2	11.6	[3] 11.2	11.2	15.2	[3] 18.2	[32] 11.6
1952	[3] 17.8	13.3	12.0	[3] 12.1	[3] 11.2	[3] 14.5	[3] 17.0	
Projected population (1965–75): [1]								
Year	1970	1970	1970	1970	1970	1970	1970	1970
Total population	[132] 1,861,000	[133] 9,455,000	[134] 14,493,000	[135] 10,663,000	[136] 34,413,000	[137] 16,990,000	[138] 20,794,000	[139] 282,000,000
Age structure: [1]								
Year	1950	1950	1950	1950	1950	1950	1950	1950
All ages [2]	[3] 1,196,000	7,266,000	12,333,000	[3] 9,272,000	24,532,000	[3] 18,982,000	[3] 16,209,000	[139] 205,000,000
0 to 14 years	438,000	1,955,000	3,120,000	2,272,000	6,975,000	4,342,000	4,666,000	[152] 70,400,000
15 to 59 years	667,000	4,611,000	7,763,000	5,869,000	15,570,000	11,736,000	10,078,000	[153] 122,300,000
60 years and over	93,000	700,000	1,449,000	1,130,000	1,988,000	2,905,000	1,464,000	12,300,000
Labor force:								
Year		[5] [6] 1934	1947	1949		1946		1952
Total	[4]	3,433,103	5,852,372	[16] 100.0	[4]	8,139,574	[4]	[34] 108,500,000
Agriculture	[4]	2,744,927	2,207,253	51.6	[19] 5,691,000	2,378,083	[28] 7,984,745	[35] 65,000,000
Nonagriculture	[4]	399,054	[9] 2,847,963	36.5	[20] 2,885,000	[24] 4,419,199	[29] 2,174,000	[36] 36,000,000
Other	[4]	289,122	[10] 797,156	11.9	[21] 1,672,000	[25] 1,342,292	[4]	[37] 7,500,000
Percent women	[4]	44.7	35.2	[4]	29.2	45.2	[30] 27	[38] 55
Unemployed:								
Date		1946		1947	1948			
Number	[4]	14,200	[4]	79,600	78,700	[4]	[4]	[4]

Education:								
Primary schools:								
Year	1950	1950	1950	1952	1951	1952	1950	1952
Enrollment	150,000	869,000	1,229,957	1,196,925	3,220,000	[26] 3,500,000	1,800,000	[30] 30,823,000
Secondary schools:								
Year		1949	1950	1952	1951	1952	1950	1952
Enrollment	(4)	129,000	25,930	119,432	235,000	(27)	190,000	[40] 3,270,000
Higher schools:								
Year		1952	1945	1951	1951	1952	1950	1952
Enrollment	(4)	29,639	[11] 71,536	[37] 40,661	134,300	28,000	48,500	[41] 1,442,000
Number technical	(4)	(4)	[12] 25,177	(17)	(22)	(4)	(4)	(4)
Technical schools:								
Year		1949	1945		1951	1952		1953
Enrollment	(4)	32,000	299,126	(4)	545,000	(27)	(4)	[42] 1,644,000
Urbanism:								
Year		1946	[13] 1947	1949	1946	1946	1948	1950
Unit of classification		(7)	(14)	(14)	(7)	(14)	(7)	(43)
Places, 5,000 to 50,000:								
Population	(4)	1,038,678	2,218,000	3,163,122	3,078,000	5,481,274	1,477,662	[44] 28,985,000
Percent of total population		14.8	18.3	34.4	13.0	21.7	9.3	14.5
Places, 50,000 to 100,000:								
Population	(4)	131,212	277,000	537,348	784,000	1,023,598	841,951	[45] 8,895,000
Percent of total population		1.9	2.3	5.8	3.3	5.9	5.3	4.5
Places, 100,000 or more:								
Population	(4)	560,328	1,667,000	1,414,263	2,411,000	2,310,572	1,271,709	[45] 38,520,000
Percent of total population		8.0	13.7	15.4	10.2	13.3	8.0	19.3

See footnotes at end of table.

TABLE XV.—*Demographic, Social, and Labor Force Data for Selected Countries or Political Units*—Continued

Data	Yugoslavia	Austria	Belgium	Denmark [80]	France [64]	Germany (Federal Republic)	Ireland	Italy
Total population:								
1938	15,927,000	6,755,000	8,374,000	3,777,000	41,100,000	39,000,000	2,937,000	42,696,000
1948	15,828,000	6,953,000	8,557,000	4,190,000	41,212,000	46,202,000	2,985,000	45,706,000
1952	16,729,000	6,949,000	8,706,000	4,334,000	42,600,000	48,478,000	2,948,000	46,865,000
Births per 1,000 population:								
1938	[15] 26.7	13.9	16.0	18.1	14.9	19.7	19.4	[15] 23.8
1948	28.2	17.7	17.6	20.3	21.0	16.6	22.1	22.0
1952	29.7	14.8	16.8	17.8	19.2	15.7	21.8	17.6
Deaths per 1,000 population:								
1938	[15] 15.6	14.0	13.2	10.3	15.8	11.4	13.6	[15] 14.1
1948	13.5	12.1	12.6	8.6	12.4	10.3	12.2	10.6
1952	11.8	11.9	12.0	9.3	12.3	10.5	11.9	10.0
Projected population (1965–75): [1]								
Year	1970	1970	1970		1970	1971		1970
Total population	[140] 22,134,000	[141] 6,934,000	[142] 8,932,000	[143]	[144] 46,117,000	[145] 52,233,000	[143]	[142] 51,356,000
Age structure: [1]								
Year	1952	1951	1951	1952	1953	1951	1951	1950
All ages [2]	16,729,000	6,934,000	8,678,000	4,334,000	42,733,000	48,077,000	2,961,000	46,280,000
0 to 14 years	5,134,000	1,587,000	1,828,000	1,148,000	9,919,000	11,205,000	855,000	12,193,000
15 to 59 years	10,157,000	4,261,000	5,456,000	2,594,000	25,916,000	30,173,000	1,667,000	28,553,000
60 years and over	1,439,000	[52] 1,086,000	1,395,000	592,000	6,897,000	6,699,000	438,000	5,534,000
Labor force:								
Year	1953	1951	1947	1951	1946	1950	1946	1951
Total	7,408,500	3,352,300	3,481,027	2,173,000	[53] 20,520,466	21,693,000	1,298,367	[78] 20,140,000
Agriculture	5,215,200	1,060,200	422,783	543,000	7,483,806	4,821,000	581,266	8,060,000
Nonagriculture	[46] 1,597,000	[53] 1,795,500	[24] 2,408,539	[60] 1,202,000	[66] 9,463,797	[70] 12,777,000	[65] 435,539	[79] 9,058,000
Other	[47] 596,300	[54] 496,600	[56] 649,705	[61] 428,000	[67] 3,572,863	[71] 4,095,000	[76] 281,562	[80] 3,022,000
Percent women	[48] 48.7	38.4	23.6	36.0	38.3	34.4	25.8	25.3
Unemployed:								
Date	II. 1953	V. 1954	V. 1954	V. 1954	I. 1954	V. 1954	VI. 1954	II. 1954
Number	70,000	[55] 141,500	[57] 168,700	[63] 22,200	[68] 220,000	[55] 1,101,930	[57] 35,800	[58] 2,173,000
Education:								
Primary schools:								
Year	1951	1952	1950	1950	1951	1950	1950	1950
Enrollment	1,454,200	830,376	810,853	415,182	4,757,901	[72] 6,389,300	[77] 452,114	4,639,810
Secondary schools:								
Year	1951	1952	1951	1950	1951	1950	1950	1950
Enrollment	[49] 489,600	67,191	126,479	96,024	856,622	[73] 816,500	49,750	533,365

Higher schools:								
Year	1951	1952	1949	1950	1948	1950	1950	1947
Enrollment	58,100	[11] 25,194	21,485	[11] 17,808	167,035	111,590	7,708	180,149
Number technical	[50] 14,600	(4)	[58] 4,038	(4)	[69] 61,515	[74] 33,138	(4)	[81] 41,186
Technical schools:								
Year	1951	1952	1950	1950	1950	1950	1950	1950
Enrollment	[51] 212,700	112,836	240,012	99,350	354,943	[73] 1,832,400	[11] 88,038	505,586
Urbanism:								
Year	1948	1951	1947	1950	1946	1950	1946	1951
Unit of classification	(14)	(14)	(14)	(53)	(14)	(14)	(53)	(14)
Places, 5,000 to 50,000:								
Population	2,025,200	970,256	3,816,277	814,304	10,211,340	11,832,000	335,160	21,762,311
Percent of total population	12.8	14.0	44.8	19.0	25.2	24.8	11.3	46.2
Places, 50,000 to 100,000:								
Population	290,200	157,391	629,403	138,439	2,194,592	2,670,000	75,595	3,609,977
Percent of total population	1.9	2.3	7.4	3.2	5.4	5.6	2.6	7.7
Places, 100,000 or more:								
Population	988,500	2,272,328	894,046	1,432,703	6,592,957	12,934,000	506,051	9,389,687
Percent of total population	6.3	32.8	10.5	33.5	16.3	27.1	17.1	19.9

See footnotes at end of table.

TABLE XV.—*Demographic, Social, and Labor Force Data for Selected Countries or Political Units*—Continued

Data	Norway	Netherlands	Portugal	United Kingdom	Spain	Sweden	Switzerland
Total population:							
1938	2,936,000	8,684,000	7,506,000	47,494,000	25,279,000	6,297,000	4,192,000
1948	3,200,000	9,800,000	8,262,000	50,065,000	27,437,000	6,883,000	4,582,000
1952	3,327,000	10,377,000	8,549,000	50,429,000	28,306,000	7,125,000	4,815,000
Births per 1,000 population:							
1938	15.4	[15] 20.5	26.6	15.5	20.1	14.9	15.2
1948	20.5	25.3	26.6	18.1	23.3	18.4	19.2
1952	18.7	22.4	24.7	15.7	20.8	15.5	17.4
Deaths per 1,000 population:							
1938	9.9	[15] 8.5	15.4	11.8	19.3	11.5	11.6
1948	8.9	7.4	13.0	10.9	11.1	9.8	10.8
1952	8.3	7.3	11.8	11.4	9.7	9.6	9.9
Projected population (1965–75): [1]							
Year		1970			1970		1971
Total population	([140])	[146] 12,134,000	([142])	([143])	[142] 31,010,000	([142])	[147] 5,173,000
Age structure: [1]							
Year	1951	1952	1951	1952	[6] 1940	1950	1951
All ages [2]	3,296,000	10,436,000	8,477,000	50,429,000	25,878,000	7,044,000	4,749,000
0 to 14 years	811,000	3,102,000	2,480,000	11,447,000	7,749,000	1,648,000	1,118,000
15 to 59 years	2,028,000	6,096,000	5,115,000	30,977,000	15,503,000	4,341,000	2,968,000
60 years and over	457,000	1,238,000	883,000	8,005,000	2,626,000	1,055,000	662,000
Labor force:							
Year	1950	1947	1950	1951	[6] 1940	1950	[6] 1941
Total	1,394,000	3,866,445	3,196,482	[88] 22,578,500	9,254,147	3,119,844	1,992,487
Agriculture	368,000	747,484	1,569,120	1,115,500	4,780,952	639,832	414,936
Nonagriculture	[60] 787,000	[69] 2,034,624	[9] 1,107,538	[24] 15,638,200	[91] 3,111,075	[24] 1,881,827	[24] 1,143,208
Other	[70] 239,000	[82] 1,084,337	[84] 519,824	[87] 5,824,800	[92] 1,362,120	[76] 598,185	[97] 434,343
Percent women	23.6	24.4	22.7	30.6	12.1	26.4	28.6
Unemployed:							
Date	V.1954	IV.1954	1951	V.1954	V.1954	IV.1954	VI.1954
Number	[55] 6,100	[55] 59,600	[55] 2,200	[57] 269,000	[55] 114,100	[94] 22,300	[55] 1,800
Education:							
Primary schools:							
Year	1951	1951	1951	1948	1949	1951	1951
Enrollment	338,000	1,270,815	671,951	4,473,532	2,751,594	628,298	476,331
Secondary schools:							
Year	1951	1951	1951	1948	1949	1951	1951
Enrollment	64,979	221,493	55,745	2,246,169	214,847	215,354	92,783

Higher schools:							
Year	1951	1948	1948	1947	1947	1948	1948
Enrollment	6,040	25,955	11,628	80,996	54,568	14,626	17,348
Number technical	(4)	[33] 8,825	[86] 3,997	[89] 25,527	[93] 7,356	[95] 2,408	[98] 6,025
Technical schools:							
Year	1951	1951	1951	1948	1949	1948	1948
Enrollment	40,848	356,341	40,214	172,231	112,538	49,980	[99] 21,112
Urbanism:							
Year	1946	1947	[6] 1940	1951	1950	1950	1950
Unit of classification	(82)	(83)	(7, 82)	(90)	(14)	(96)	(14)
Places, 5,000 to 50,000:							
Population	442,674	2,141,901	854,855	13,285,593	10,073,177	1,401,284	1,102,847
Percent of total population	14.0	22.3	11.1	26.5	36.0	19.9	23.4
Places, 50,000 to 100,000:							
Population	139,111	825,426	54,856	6,504,761	1,743,076	426,439	195,462
Percent of total population	4.4	8.6	0.7	13.0	6.2	6.1	4.1
Places, 100,000 or more:							
Population	592,570	3,145,183	[87] 971,488	19,172,503	6,740,361	1,365,881	972,342
Percent of total population	18.8	32.7	11.1	38.2	24.1	19.4	20.6

See footnotes at end of table.

TABLE XV.—*Demographic, social, and labor force data for selected countries or political units*—Continued

Data	Finland	Luxembourg	New Zealand [109]	Japan	Australia [117]	Saar	West Berlin	Greece
Total population:								
1938	3,656,000	299,000	1,604,000	[109] 70,532,000	6,899,000	873,000	2,735,000	7,202,000
1948	3,912,000	292,000	1,833,000	[110] 80,010,000	7,710,000	903,000	2,108,000	7,749,000
1952	4,091,000	301,000	1,995,000	[110] 85,500,000	8,649,000	965,000	2,170,000	7,761,000
Births per 1,000 population:								
1938	21.0	14.9	18.0	[18] 27.1	17.5	22.1	[123] 14.9	26.1
1948	27.5	14.7	25.5	33.7	23.1	18.7	[123] 9.7	27.0
1952	23.1	16.0	24.8	23.4	23.3	19.2	8.3	(4)
Deaths per 1,000 population:								
1938	12.8	12.7	9.7	[15] 17.7	9.6	10.7	[123] 13.2	13.3
1948	11.2	11.8	9.1	12.0	10.0	10.2	[122] 14.7	12.4
1952	9.5	12.5	9.3	8.9	9.4	9.9	13.1	(4)
Projected population (1965–75): [1]								
Year			1970	1970	1970		1970	
Total population	(4)	([142])	[145] 2,780,000	[149] 100,662,000	[150] 9,900,000	(4)	[151] 2,267,000	(4)
Age structure: [1]								
Year	1951	1947	1952	1951	1952	1946	1952	[6] 1940
All ages [3]	4,047,000	291,000	1,876,000	84,570,000	8,649,000	852,000	2,170,000	7,345,000
0 to 14 years	1,219,000	58,000	544,000	29,661,000	2,378,000	221,000	373,000	2,423,000
15 to 59 years	2,417,000	192,000	1,076,000	48,385,000	5,203,000	536,000	1,353,000	4,212,000
60 years and over	[52] 412,000	41,000	256,000	6,524,000	1,067,000	94,000	443,000	709,000
Labor force:								
Year	1950	1947	1945	1950	1947	1946	1950	1946
Total	1,984,284	135,139	679,465	36,280,000	[119] 3,238,218	298,477	1,004,500	[138] 2,663,000
Agriculture	911,989	35,076	127,405	17,250,000	498,019	36,952	20,836	1,501,000
Nonagriculture	[100] 816,991	[103] 78,762	[107] 353,203	[111] 13,530,000	[60] 1,897,662	[120] 205,555	[120] 663,297	[139] 634,000
Other	[101] 255,304	[104] 21,301	[108] 198,857	[112] 5,500,000	[76] 842,537	[121] 55,970	[123] 320,367	[130] 528,000
Percent women	40.7	28.7	24.1	38.6	23.4	27.0	41.8	(4)
Unemployed:								
Date	V.1954	1952	V.1954	IV.1954	IV.1954	III.1954	VI.1954	1946
Number	[84] 11,000	([104])	([104])	510,000	[88] 8,320	7,400	190,731	197,000
Education:								
Primary schools:								
Year	1951	1951	1951	1951	1950		1953	1951
Enrollment	496,832	29,264	303,737	11,419,267	1,175,000	(4)	[124] 149,724	915,102
Secondary schools:								
Year	1951	1951	1951	1951	1950		1953	1951
Enrollment	97,916	2,843	62,006	[113] 7,318,919	197,000	(4)	[125] 105,965	208,269

Higher schools:								
Year	1948		1951	1950	1948	1952	1952	1951
Enrollment	13,341		[11] 10,493	[11] 405,157	29,034	1,248	11,793	11,911
Number technical	[102] 4,107	0	[4]	[114] 62,558	[119] 7,161	[4]	[125] 4,163	[4]
Technical schools:								
Year	1948		1948		1950		1952	
Enrollment	25,946	1951 3,413	7,488	[116]	166,269	[4]	[127] 79,271	1951 25,358
Urbanism:								
Year	1950		1951	1950	1947		1952	1951
Unit of classification	[7]	1947 [14]	[7]	[7]	[68]			[7]
Places, 5,000 to 50,000:								
Population	772,332	81,020	360,162	[118] 3,857,233	[4]	[4]	0	[131] 1,016,196
Percent of total population	19.2	27.8	18.6	4.6			0.0	13.4
Places, 50,000 to 100,000:								
Population	0	61,996	170,335	6,019,743	[4]	[4]	0	196,924
Percent of total population	0.0	21.3	8.8	7.2			0.0	2.6
Places, 100,000 or more:								
Population	571,744	0	636,758	21,326,215	3,894,563	[4]	2,170,000	1,595,635
Percent of total population	14.2	0.0	32.8	25.6	51.5		100.0	21.0

[1] For the distribution of the population by sex and 5-year age groups, see tables XVI and XVII.

[2] Numbers are rounded to the nearest thousand without adjustment to group totals which are independently rounded.

[3] Estimated by the U. S. Bureau of the Census.

[4] Not available.

[5] Excluding Southern Dobruja.

[6] Postwar data not available.

[7] Localities having fixed boundaries and an administratively recognized "town" status which is usually characterized by some form of local government, operating under a charter or under terms of incorporation. Such localities have various designations. Among the most frequent are: "cities," "towns," "boroughs," "urban districts," and "municipalities." Sometimes they are districts which include a central agglomeration and the surrounding territory that is administered from the central place; sometimes they are separate cities with "city limits" which may fall inside the edges of the agglomeration.

[8] Excludes territory ceded by Hungary in 1947.

[9] Consists of mining, manufacturing, handicrafts, construction, transport, communications, and commerce.

[10] Consists of public administration, liberal professions, domestic service, and activities not adequately described.

[11] Includes teacher training.

[12] Consists of students in the Polytechnic Institutes.

[13] Czech census and Slovak estimate for May 22, 1947.

[14] Minor civil divisions which have fixed boundaries and which together comprise the entire area of the country.

[15] For the 1938 territory.

[16] This percentage distribution of the total population by "social status" are the only data available from the Jan. 1, 1949 census that pertain to the economically active population. Nonagriculture includes all wage and salary workers; "other" includes the unemployed and the unknowns.

[17] The number of students included: engineering (13,825); political economy and commerce (3,985); medicine (3,578); art, music, and drama (1,586); and law and political science (1,545). These figures were obtained by applying percentages of students enrolled in certain courses (Juhasz, Blueprint for a Red Generation, p. 55) to the total of 40,661.

[18] Official estimate of the population on Jan. 1, 1939, within the 1949 territory.

[19] As of Dec. 3, 1950. Estimated on the basis of the percent dependent on agriculture in 1950 (Statistical News, v. XXIV, No. 2, February 1951) and the percentage of the agricultural population which was economically active in 1931 (International Labour Office, Yearbook of Labour Statistics, 1947-1948).

[20] Estimated by the U. S. Bureau of the Census for July 1, 1949. Consists of the labor force in mining, manufacturing, construction, and transportation.

[21] Estimated by the U. S. Bureau of the Census for July 1, 1949. Presumably excludes Armed Forces.

[22] Not available for 1951. In 1947, with a total enrollment of 94,586 in schools of higher education, 18,970 were majoring in "technical" subjects and 7,287 in mathematics and natural science. (Poland. Rocznik Statystyczny (Statistical Yearbook of Poland), 1949, pp. 200, 214-216).

[23] For 1939.

[24] Consists of mining and quarrying, manufacturing, construction, commerce, transport, and communications.

[25] Consists of electricity, gas and water, services, and domestic service.

[26] Includes secondary and vocational schools.

[27] Included in the figure for primary schools.

[28] Number of persons who were actively engaged in agriculture in 1946-47, as determined by the agricultural census of 1948.

[29] As of 1950. Based on a statement in Komsomol Pravda, No. 13, Jan. 17, 1951, that the number of employed workers in 1955 would be 3 million, or 38 percent higher than in 1950.

[30] Percent of all workers in industry (Romania Liberia, No. 2314, Mar. 8, 1952, p. 1).

[31] As of Jan. 1, 1950. Based on relatively low death rates and relatively high birth rates between 1939 and 1950.

[32] For 1950. Estimated by the U. S. Bureau of the Census.
[33] Estimated from a reported vital index of 197.5 (Bol'shaya Entsiklopediya SSSR, U. S. S. R. vol. 1947).
[34] Figures are intended to be only approximations of the number of persons in given sectors of the economy.
[35] Estimate based on the size of the rural population in 1952 and assuming 50-55 percent participation in the labor force. Mid value given. Includes workers in Machine Tractor Stations and workers on State farms.
[36] Estimate based on the reported number of workers and employees (41,700,000—see Vestnik Statistiki, No. 1, 1953, p. 15), with an allowance of 14 percent for workers in agriculture, forestry, and fishing.
[37] Estimate includes approximately 4.5 million in the Armed Forces, 2.0 million forced laborers other than in the agricultural and nonagricultural sectors, and 1.0 million domestic and other workers.
[38] As of 1950. This estimate employs a reported participation rate for nonagriculture (Kalendor Spravochnik, 1950, Gosplonizdat, Moscow, 1950) and assumes some increase in the prewar participation rate of women in agriculture as given in: N. Voyennaya, Ekonomika SSSR v Period Otechestvennoi Voiny (The Military Economy of the U. S. S.R. during the Period of the Patriotic War), Gosizdat polit. Lit., Moscow, 1948, p. 113.
[39] Includes grades 1 to 7. Includes an unknown number of preparatory pupils, especially minority group children, undergoing special language training. This figure was obtained by adding such figures reported for Republics of the U.S.S.R. in scattered newspapers and radio releases.
[40] Consists of enrollment in grades 8 to 10.
[41] Includes correspondence students who may comprise as many as 40 to 50 percent of all students.
[42] "Tekhnikum" enrollment. Includes correspondence courses. In addition, specialized training is available in schools not classified as tekhnikums. In recent years it is estimated that the number of students receiving technical training in other special schools is more than double the figure for tekhnikum enrollment.
[43] Localities with urban status, based on both size and function.
[44] For cities of less than 50,000 population. Calculated as the residual between the total urban population and the population of cities of 50,000 or more.
[45] Estimated on the basis of election statistics.
[46] Consists of manufacturing, handicrafts, mining, construction, commerce, and transportation.
[47] Consists of government employees, housing and public works, professional and personal services, and unknowns. Excludes the Armed Forces and the unemployed.
[48] In 1948. It should be noted that over 95 percent of women 15 to 60 years old dependent on agriculture were classed as economically active in 1948 as compared with 53 percent in 1931, indicating a real difference in the census definition of an economically active woman in 1948.
[49] Consists of students in the "8-year" school and the gymnasia.
[50] Consists of students enrolled in the faculties of mathematics and natural science and "technology," i. e., engineering, architecture, transportation, etc.
[51] Consists of 132,400 students in the lower vocational schools and 80,300 students in the higher vocational schools.
[52] Includes unknowns.
[53] Consists of manufacturing and handicrafts, commerce, and transportation.
[54] Consists of liberal professions, public services, domestic service, and activities not adequately described.
[55] Registered unemployed.
[56] Consists of hotels and personal services, public services and other services of genera interest, Armed Forces, unemployed, and activities not adequately described.
[57] Insured unemployed.
[58] Consists of students enrolled in the faculties of pure science and mathematics, and applied sciences, arts, and manufacturing.
[59] Excluding the Faeroe Islands, the population of which was 32,000 in 1950.
[60] Consists of manufacturing, mining and quarrying, construction, commerce, transport, storage, and communications.
[61] Consists of electricity, gas, water, and sanitary services, services, and activities not adequately described.
[62] Insured unionists.
[63] Agglomerations or clusters of population without regard to official boundaries or administrative functions.
[64] Excludes the Saar.
[65] The 1946 census figures exclude "Nationals of Allied Powers" in France or French officials and Armed Forces stationed outside France at the time of the census.
[66] Consists of mining and quarrying, manufacturing, construction, commerce, and transportation.
[67] Consists of electricity, gas, and water, services and activities not adequately described.
[68] Applicants for work.
[69] Consists of students of the science faculty of the universities, and students of "grandes écoles" and independent institutes.
[70] Consists of industry, handicrafts, commerce, and transportation.
[71] Consists of service industries and unknowns.
[72] Consists of pupils in the "Volksschulen" and the general elementary school (Allgemeine Volksschulen) in Bremen.
[73] Consists of pupils in the "Mittelschulen" and the "Höhere Schulen."
[74] Consists of students enrolled in the faculties of engineering, mathematics, chemistry, physics, and other natural sciences.
[75] Consists of 1,728,000 students in part-time vocational (Berufsschulen) and full-time (Berufsfachschulen) schools and 104,500 students in the technical higher schools (Fachschulen).
[76] Consists of electricity, gas, water, and sanitary services, services, and activities not adequately described.
[77] Includes kindergarten.
[78] Estimates for the census date based on a labor force sample survey.
[79] Consists of manufacturing, mining, transport, communications, and commerce.
[80] Consists of services and people seeking work for the first time.
[81] Consists of students in the Naval Institute and students of the faculties of engineering, architecture, mathematics, physical and natural sciences, and industrial chemistry.
[82] Consists of electricity, gas, water, and sanitary services, services, Armed Forces (other than temporary), and activities not adequately described.
[83] Consists of students enrolled in the faculties of mathematics and physics, technology, and the joint faculties of mathematics and physics and literature and philosophy.
[84] Consists of industries relating to public service, services, and activities not adequately described.
[85] Includes some partially unemployed.
[86] Consists of students enrolled in the faculties of science, engineering, and technology.
[87] Excluding the suburbs of Lisbon and Porto.
[88] Excluding Northern Ireland. All figures are estimates based on a 1 percent sample of the 1951 census.

[89] Consists of students enrolled in the faculties of pure science and technology in universities in England, Wales, and Scotland and in science, applied science and technology, and civil engineering in higher schools in Northern Ireland.
[90] For England and Wales—places with fixed boundaries; for Northern Ireland and Scotland—urban places and villages not having legally defined boundaries.
[91] Consists of mining and quarrying, manufacturing, construction, electricity, commerce, and transportation.
[92] Consists of services, Armed Forces, unemployed, and activities not adequately described.
[93] Consists of students enrolled in the faculty of science.
[94] Registered unionists.
[95] Consists of students enrolled in the faculty of technology.
[96] Agglomerations or clusters of population without regard to official boundaries or administrative functions. Agglomerations with more than 60 percent of the population engaged in agriculture are not classified as localities.
[97] Consists of hotels, public administration and liberal professions, domestic service, institutions with resident staff, and activities not adequately described.
[98] Consists of students enrolled in faculties of science, architecture, engineering, chemistry and pharmacy, and mathematics, physics, and natural science.
[99] Excludes teacher training and agricultural courses.
[100] Consists of mining and quarrying, manufacturing, electric, gas, water, and sanitary services, construction, commerce, transport, and communications.
[101] Consists of services, and activities not adequately described.
[102] Consists of students enrolled in the faculties of physics-mathematics, engineering and architecture, and engineering-chemistry.
[103] Consists of manufacturing and handicrafts, commerce, transport, and hotels.
[104] Consists of public and personal services, domestic service, and activities not adequately defined.
[105] Less than 100 persons.
[106] Excluding Maoris.
[107] Consists of mining and quarrying, manufacturing, construction, transport and communications, and commerce and finance.
[108] Consists of public administration and liberal professions, domestic and personal services, industry not specified, and Armed Forces.
[109] For the 1938 territory. Excludes Armed Forces outside the country, estimated at 1 million in 1940.
[110] Excludes occupation personnel.
[111] Consists of mining and quarrying, manufacturing, construction, commerce, communications, and electric, gas, water, and sanitary service, transport, and storage.
[112] Consists of services not adequately described and unemployed.
[113] Includes vocational schools and part-time secondary schools. There were 412,348 students in these part-time schools in 1950.
[114] Consists of students enrolled in "technical schools."
[115] Included in the secondary school figure.
[116] Includes 20,000 to 50,000 only.
[117] Excludes full-blooded aborigines, estimated at 47,000 in 1944.
[118] Figures adjusted to include part-time women workers who were not recorded as economically active in the 1947 census.
[119] Consists of students enrolled in the faculties of science, engineering, and architecture.
[120] Consists of mining and quarrying, manufacturing, construction, commerce, transport, storage, and communications.
[121] Consists of electricity, gas, water, and sanitary services, and services.
[122] For Greater Berlin.
[123] Consists of electricity, gas, water, and sanitary services, and activities not adequately defined.
[124] Consists of pupils in the "Grundschulen."
[125] Consists of pupils in the "Oberschulen Praktischen," "Oberschulen Technischen," and the "Oberschulen Wissenschaftlichen."
[126] Consists of students in the Technische Universität and enrolled in the faculty of mathematics and natural science at the Freie Universität.
[127] Consists of pupils enrolled in the "Fachschulen," "Berufsfachschulen," and the "Berufsschulen."
[128] Estimates based on a labor force sample survey conducted by the Allied Mission in connection with the 1946 election.
[129] Consists of mining and salt mining, manufacturing, construction, transportation, and business.
[130] Consists of the industrial group "all other" (i. e., all but agriculture and those mentioned in footnote 129), and unemployed.
[131] Cities 10,000 to 50,000.
[132] Based on the following assumptions: age distribution for males was the same as for Macedonia in 1948; the sex ratio for each age group was the same as that shown in the life tables computed for Rumania for the period 1945–49; fertility rates would be 15 percent lower than the level of Macedonia in 1948–49; the same mortality as that projected for Rumania for the same period; and no migration.
[133] Based on the following assumptions: fertility would increase by 1950 to the 1934–35 level and then remain constant; infant mortality would decline by 4 points a year; mortality above infancy would fall every 5 years after 1950 at a rate of decline based on the mortality experience of several European countries between the 1870's and the 1930's and on that of the United States between 1900 and 1930; and no migration after 1951.
[134] Based on the following assumptions: fertility would decrease between 1950 and 1960 at the average annual rate of decline between 1920 and 1950 and remain constant thereafter; continuation of prevailing mortality; and no migration.
[135] Based on the assumptions of fertility at the 1952 level, decreasing mortality from the 1948–49 level, and no migration.
[136] Based on the following assumptions: fertility would decrease from 1951 to 1960 (when it would reach the average level of 1949–51) and remain constant thereafter; death rates would decline at the same rate as in the period 1931–32 to 1948; and no migration.
[137] Based on the following assumptions: age-specific fertility rates for males would remain at the 1950 level; mortality rates between 1950 and 1955 would be the same as those in the 1932–34 life table for Germany and decline thereafter; emigration of 850,000 between 1950 and 1954 and 100,000 each year thereafter.
[138] Based on the following assumptions: fertility would rise to the 1938–39 level by 1950 and would remain constant thereafter; infant deaths would fall 4 points per year; mortality above infancy would decline at the same rate as in several European countries between the 1870's and the 1930's and in the United States between 1900 and 1930; and no migration.
[139] Based on the following assumptions: fertility would be at a level implied by a crude birth rate of 28 for 1950; mortality would decline at a decreasing rate from the level implied by a crude death rate of 10 in 1950.
[140] Based on the following assumptions: fertility would remain constant at the 1953 level; infant mortality would decline by 3.3 percent per year; mortality above infancy would decline after 1955 at the same rate as in several European countries between the 1870's and the 1930's and in the United States between 1900 and 1930; and no migration.
[141] Based on the assumptions of fertility remaining at the 1951 level, mortality remaining at the 1945–51 level; and no migration.

[142] Based on the assumptions that fertility would remain at the present level and that mortality would remain at the 1950 level.
[143] Not available from unclassified sources.
[144] Based on the assumptions that fertility would remain at the 1951 level and that mortality would remain at the 1946–48 level.
[145] Based principally on the following assumptions: fertility of married women would increase 10 percent in 10 years; mortality would decline from the 1949–51 level; and no migration.
[146] Based on the following assumptions: fertility would be the average of various fertility assumptions based on a maximum and minimum number of married women in the reproductive ages in combination with marital fertility remaining at the 1952 level or declining at the same rate as between 1910 and 1937; mortality remaining at the 1947–49 level; and emigration of 50,000 a year.
[147] Based on the following assumptions: fertility at the average of the 1931–50 level; continuing decline in mortality; and no migration.
[148] Includes Maoris. Based on an assumed rate of natural increase of 15 per 1,000 per year and 10,000 immigrants per year.
[149] Based on the following assumptions: fertility would decline to Sweden's level of 1937 by 1965 and then remain constant; mortality would decline to the present level of New Zealand by 1965 and then remain constant.
[150] Based on the following assumptions: fertility at the 1949 level; mortality at the 1946–48 level; and no migration.
[151] Based on the following assumptions: fertility at the 1951–52 level; mortality above age 1 at the 1949–51 level; infant mortality would decline by 2 percent by 1959 and remain constant thereafter; net immigration of 20,000 each year.
[152] Less than 16 years.
[153] 16 to 59 years.

TABLE XVI.—*Distribution of the population by age and sex: Selected countries or political units*

Age and sex	Albania	Bulgaria	Czechoslovakia	Hungary	Poland	East Germany	Rumania
	Estimate January 1, 1950	Estimate January 1, 1950	Estimate January 1, 1950	Estimate January 1, 1950	Estimate January 1, 1950	Estimate January 1, 1950	Estimate January 1, 1950
BOTH SEXES							
All ages	1,197,000	7,266,000	12,333,000	9,272,000	24,532,000	18,982,000	16,209,000
0 to 14 years	438,000	1,955,000	3,120,000	2,272,000	6,975,000	4,342,000	4,666,000
15 to 59 years	668,000	4,611,000	7,763,000	5,869,000	15,570,000	11,736,000	10,078,000
60 years and over	94,000	700,000	1,449,000	1,130,000	1,988,000	2,905,000	1,464,000
Unknown							
MALE							
All ages	595,000	3,642,000	6,004,000	4,458,000	11,687,000	8,432,000	7,816,000
0 to 14 years	221,000	995,000	1,588,000	1,149,000	3,548,000	2,209,000	2,360,000
15 to 59 years	333,000	2,320,000	3,785,000	2,805,000	7,318,000	4,987,000	4,814,000
60 years and over	43,000	326,000	632,000	503,000	823,000	1,236,000	641,000
Unknown							
FEMALE							
All ages	602,000	3,624,000	6,329,000	4,814,000	12,845,000	10,550,000	8,393,000
0 to 14 years	217,000	960,000	1,532,000	1,123,000	3,427,000	2,133,000	2,306,000
15 to 59 years	335,000	2,291,000	3,978,000	3,064,000	8,252,000	6,749,000	5,264,000
60 years and over	51,000	374,000	817,000	627,000	1,165,000	1,669,000	823,000
Unknown							

MALE							
All ages	595,000	3,642,000	6,004,000	4,458,000	11,687,000	8,432,000	7,816,000
0 to 4 years	86,000	378,000	633,000	406,000	1,387,000	560,000	824,000
5 to 9 years	66,000	311,000	504,000	384,000	1,010,000	771,000	711,000
10 to 14 years	69,000	306,000	451,000	359,000	1,151,000	878,000	825,000
15 to 19 years	67,000	342,000	469,000	379,000	1,229,000	681,000	796,000
20 to 24 years	54,000	364,000	508,000	387,000	1,108,000	596,000	776,000
25 to 29 years	48,000	334,000	460,000	309,000	960,000	477,000	520,000
30 to 34 years	36,000	221,000	394,000	186,000	650,000	369,000	441,000
35 to 39 years	30,000	281,000	437,000	379,000	848,000	550,000	553,000
40 to 44 years	36,000	261,000	473,000	361,000	857,000	612,000	546,000
45 to 49 years	27,000	216,000	426,000	329,000	731,000	656,000	465,000
50 to 54 years	21,000	178,000	351,000	272,000	553,000	573,000	392,000
55 to 59 years	14,000	123,000	267,000	203,000	382,000	473,000	325,000
60 to 64 years	13,000	107,000	204,000	173,000	312,000	425,000	261,000
65 years and over	30,000	219,000	428,000	330,000	511,000	811,000	380,000
Unknown							
FEMALE							
All ages	602,000	3,624,000	6,329,000	4,814,000	12,845,000	10,550,000	8,393,000
0 to 4 years	84,000	366,000	602,000	390,000	1,341,000	538,000	803,000
5 to 9 years	65,000	299,000	491,000	375,000	975,000	743,000	699,000
10 to 14 years	68,000	295,000	439,000	358,000	1,111,000	852,000	804,000
15 to 19 years	66,000	329,000	460,000	379,000	1,202,000	689,000	777,000
20 to 24 years	54,000	349,000	513,000	400,000	1,263,000	730,000	801,000
25 to 29 years	48,000	324,000	476,000	409,000	1,117,000	725,000	589,000
30 to 34 years	36,000	218,000	410,000	247,000	770,000	570,000	510,000
35 to 39 years	30,000	275,000	454,000	392,000	961,000	841,000	630,000
40 to 44 years	37,000	257,000	490,000	360,000	945,000	896,000	627,000
45 to 49 years	27,000	215,000	453,000	332,000	826,000	840,000	499,000
50 to 54 years	22,000	186,000	397,000	302,000	673,000	777,000	439,000
55 to 59 years	15,000	138,000	325,000	243,000	495,000	681,000	392,000
60 to 64 years	14,000	131,000	258,000	217,000	416,000	583,000	323,000
65 years and over	37,000	243,000	559,000	410,000	749,000	1,086,000	500,000
Unknown							

TABLE XVI.—*Distribution of the population by age and sex: Selected countries or political units*—Continued

Age and sex	U. S. S. R.	Yugoslavia	Austria	Belgium	Denmark	France	Federal Republic of Germany
	Estimate January 1, 1950	Estimate June 30, 1952	Census June 1, 1951	Estimate 1951	Estimate July 1, 1952	Estimate January 1, 1953	Estimate 1951
BOTH SEXES							
All ages	205,000,000	16,728,856	6,933,905	8,678,386	4,333,800	42,732,900	48,076,900
0 to 14 years	[1] 70,400,000	5,133,618	1,586,697	1,827,607	1,147,900	9,919,400	11,204,850
15 to 59 years	[2] 122,300,000	10,156,581	4,260,568	5,455,636	2,594,400	25,916,100	30,173,150
60 years and over	12,300,000	1,438,634	1,082,709	1,395,143	591,500	6,897,400	6,698,850
Unknown		23	3,931				
MALE							
All ages	96,400,000	8,104,026	3,217,240	4,272,338	2,149,100	20,645,400	22,544,000
0 to 14 years	[1] 35,300,000	2,614,593	808,100	927,469	586,600	5,040,100	5,724,600
15 to 59 years	[2] 56,400,000	4,873,848	1,952,385	2,716,205	1,282,400	12,876,500	13,848,600
60 years and over	4,600,000	615,567	454,884	628,664	280,100	2,728,800	2,970,750
Unknown		18	1,871				
FEMALE							
All ages	108,600,000	8,624,830	3,716,665	4,406,048	2,184,700	22,087,500	25,532,900
0 to 14 years	[1] 35,100,000	2,519,025	778,597	900,138	561,300	4,879,300	5,480,250
15 to 59 years	[2] 65,900,000	5,282,733	2,308,183	2,739,431	1,312,000	13,039,600	16,324,550
60 years and over	7,700,000	823,067	627,825	766,479	311,400	4,168,600	3,728,100
Unknown		5	2,060				
MALE							
All ages	96,400,000	8,104,026	3,217,240	4,272,338	2,149,100	20,645,400	22,544,000
0 to 4 years	[3]	1,009,678	270,897	355,301	200,900	2,046,700	1,791,350
5 to 9 years	[3]	730,961	261,103	292,628	218,700	1,676,300	1,701,100
10 to 14 years	[3]	873,954	276,100	279,540	167,000	1,317,100	2,232,150
15 to 19 years	[3]	918,793	223,882	304,136	150,700	1,490,000	1,826,450
20 to 24 years	[3]	841,844	243,511	329,203	144,300	1,678,100	1,804,950
25 to 29 years	[3]	633,397	223,610	351,723	149,600	1,696,700	1,529,950
30 to 34 years	[3]	420,719	158,957	261,433	156,300	1,455,100	1,153,000
35 to 39 years	[3]	398,684	203,006	299,659	153,500	1,121,300	1,450,700
40 to 44 years	[3]	536,510	241,544	322,977	155,700	1,514,300	1,719,800
45 to 49 years	[3]	475,763	254,364	322,424	140,000	1,505,100	1,770,150
50 to 54 years	[3]	385,424	226,770	289,215	124,300	1,395,600	1,486,700
55 to 59 years	[3]	268,714	176,741	235,435	108,000	1,020,300	1,106,900
60 to 64 years	[3]	210,010	149,003	197,020	89,400	833,500	945,800
65 years and over	[3]	405,557	305,881	431,644	190,700	1,895,300	2,024,950

Unknown		18	1,871				
FEMALE							
All ages	108,600,000	8,624,830	3,716,665	4,406,048	2,184,700	22,087,500	25,532,900
0 to 4 years	(2)	981,300	258,894	342,057	191,000	1,967,500	1,699,300
5 to 9 years	(2)	700,678	252,299	282,780	208,900	1,621,000	1,633,300
10 to 14 years	(2)	837,047	267,404	275,301	161,400	1,290,800	2,147,650
15 to 19 years	(2)	885,550	216,330	300,422	145,700	1,454,800	1,758,350
20 to 24 years	(2)	836,334	242,737	322,973	143,100	1,607,200	1,778,600
25 to 29 years	(2)	763,242	293,732	336,524	153,900	1,611,700	1,987,200
30 to 34 years	(2)	596,167	213,473	253,775	160,800	1,400,600	1,568,150
35 to 39 years	(2)	468,620	260,136	295,924	156,500	1,119,400	1,917,300
40 to 44 years	(2)	565,289	295,122	323,646	157,900	1,523,100	2,122,800
45 to 49 years	(2)	491,795	287,085	328,060	144,900	1,518,100	1,958,550
50 to 54 years	(2)	427,810	266,592	308,596	132,700	1,463,400	1,744,050
55 to 59 years	(2)	337,926	232,976	269,211	116,500	1,341,300	1,489,550
60 to 64 years	(2)	281,896	200,669	229,469	97,700	1,179,500	1,233,450
65 years and over	(2)	541,171	427,156	537,010	213,700	2,989,100	2,494,650
Unknown		5	2,060				

[1] Less than 16 years.
[2] 16 to 59 years.
[3] Not available.

TABLE XVI.—*Distribution of the population by age and sex: Selected countries or political units*—Continued

Age and sex	Ireland	Italy	Norway	Netherlands	Portugal	United Kingdom	Spain	Sweden	Switzerland
	Census Apr. 8, 1951	Estimate 1950	Estimate Dec. 1, 1951	Estimate Dec. 31, 1952	Estimate July 1, 1951	Estimate June 30, 1952	Census Dec. 31, 1940	Census Dec. 31, 1950	Estimate 1951
BOTH SEXES									
All ages	2,960,593	46,279,523	3,295,559	10,435,631	8,477,270	50,428,878	25,877,971	7,044,039	4,748,648
0 to 14 years	854,810	12,193,432	810,970	3,101,581	2,479,849	11,446,888	7,748,951	1,648,013	1,118,110
15 to 59 years	1,667,332	28,552,528	2,027,930	6,095,719	5,114,809	30,977,007	15,502,778	4,340,759	2,968,444
60 years and over	438,451	5,533,563	456,659	1,238,331	882,612	8,004,983	2,626,242	1,055,267	662,094
Unknown									
MALE									
All ages	1,506,597	22,549,704	1,634,606	5,198,033	4,077,692	24,230,687	12,413,777	3,513,300	2,315,482
0 to 14 years	436,447	6,215,859	415,865	1,590,133	1,262,046	5,847,276	3,903,480	841,220	570,099
15 to 59 years	853,766	13,839,116	1,011,515	3,014,032	2,459,664	15,033,222	7,368,129	2,174,784	1,456,438
60 years and over	216,384	2,494,729	207,226	593,868	355,982	3,350,189	1,142,177	497,296	288,945
Unknown									
FEMALE									
All ages	1,453,996	23,729,819	1,660,953	5,237,598	4,399,578	26,198,191	13,464,194	3,530,739	2,433,166
0 to 14 years	418,363	5,977,573	395,105	1,511,448	1,217,803	5,599,612	3,845,471	806,793	548,011
15 to 59 years	813,566	14,713,412	1,016,415	3,081,687	2,655,145	15,943,785	8,134,658	2,165,975	1,512,006
60 years and over	222,067	3,038,834	249,433	644,463	526,630	4,654,794	1,484,065	557,971	373,149
Unknown									
MALE									
All ages	1,506,597	22,549,704	1,634,606	5,198,033	4,077,692	24,230,687	12,413,777	3,513,300	2,315,482
0 to 4 years	160,231	2,189,227	162,447	585,047	451,809	2,096,157	1,137,423	307,613	212,309
5 to 9 years	143,490	1,916,361	143,988	567,635	420,002	2,055,946	1,389,725	299,829	202,616
10 to 14 years	132,726	2,110,271	109,430	437,451	390,235	1,695,173	1,376,332	233,778	155,174
15 to 19 years	125,742	2,048,365	103,122	465,579	409,808	1,562,828	1,248,068	208,473	160,855
20 to 24 years	105,380	6,897,804	115,832	406,187	375,963	1,578,154	1,014,912	228,040	169,484
25 to 29 years	99,595		131,441	383,866	346,196	1,777,572	952,273	267,548	180,693
30 to 34 years	96,441		133,089	362,385	267,497	1,810,235	928,563	275,761	170,175
35 to 39 years	102,278		126,013	335,736	267,904	1,788,000	825,673	280,761	174,705
40 to 44 years	94,006		117,148	321,990	251,186	1,897,628	733,524	276,886	178,396
45 to 49 years	82,374	4,892,947	105,626	330,451	214,079	1,805,786	627,596	239,135	163,966
50 to 54 years	82,922		97,057	264,846	179,011	1,552,029	571,978	217,529	141,734
55 to 59 years	65,028		82,187	232,992	148,020	1,260,990	465,533	180,651	116,430
60 to 64 years	61,346	802,160	64,881	191,088	123,962	1,080,640	422,528	156,771	95,142
65 years and over	155,038	1,692,569	142,345	402,780	232,020	2,269,549	719,649	340,525	193,803

Unknown									
FEMALE									
All ages	1, 453, 996	23, 729, 819	1, 660, 953	5, 237, 598	4, 399, 578	26, 198, 191	13, 464, 194	3, 530, 739	2, 433, 166
0 to 4 years	152, 601	2, 094, 220	152, 878	552, 437	431, 599	1, 998, 507	1, 110, 710	295, 793	202, 616
5 to 9 years	137, 553	1, 841, 134	136, 782	540, 012	406, 521	1, 967, 055	1, 369, 658	284, 923	194, 805
10 to 14 years	128, 209	2, 042, 219	105, 445	418, 999	379, 683	1, 634, 050	1, 365, 103	226, 077	150, 590
15 to 19 years	115, 440	1, 998, 266	99, 510	389, 238	407, 841	1, 625, 580	1, 297, 114	206, 040	159, 071
20 to 24 years	96, 792		110, 912	398, 239	378, 804	1, 709, 267	1, 167, 204	227, 783	172, 072
25 to 29 years	98, 826	7, 203, 604	127, 308	390, 743	359, 445	1, 823, 939	1, 107, 342	266, 081	182, 165
30 to 34 years	95, 125		132, 702	372, 343	280, 253	1, 853, 067	993, 572	265, 511	167, 337
35 to 39 years	98, 638		124, 641	345, 975	289, 932	1, 858, 797	908, 125	273, 453	174, 334
40 to 44 years	86, 320		118, 096	336, 865	276, 733	1, 944, 589	807, 807	270, 937	184, 539
45 to 49 years	78, 541	5, 511, 542	111, 231	317, 194	254, 296	1, 872, 572	701, 803	243, 338	175, 567
50 to 54 years	80, 064		103, 683	282, 418	217, 779	1, 720, 599	621, 900	216, 218	160, 292
55 to 59 years	63, 820		88, 332	248, 672	190, 062	1, 535, 375	529, 791	196, 614	136, 629
60 to 64 years	60, 714	1, 001, 881	73, 347	203, 825	164, 984	1, 375, 931	513, 326	171, 279	114, 923
65 years and over	161, 353	2, 036, 953	176, 086	440, 638	361, 646	3, 278, 863	970, 739	386, 692	258, 226
Unknown									

TABLE XVI.—*Distribution of the population by age and sex: Selected countries or political units*—Continued

Age and sex	Finland	Luxembourg	Australia	New Zealand	Japan	West Berlin	Saar	Greece
	Estimate 1951	Census Dec. 31, 1947	Estimate June 30, 1952	Estimate 1952	Estimate Oct. 1, 1951	Estimate June 30, 1952	Census Oct. 29, 1946	Census Oct. 16, 1940
BOTH SEXES								
All ages	4,047,400	290,992	8,648,539	1,875,940	84,570,000	2,169,600	851,615	7,344,860
0 to 14 years	1,218,700	57,710	2,377,794	544,410	29,661,000	373,400	221,067	2,423,442
15 to 59 years	2,416,800	192,189	5,203,341	1,075,900	48,385,000	1,352,800	536,423	4,212,353
60 years and over	410,000	41,093	1,067,404	255,630	6,524,000	443,400	94,126	709,065
Unknown	1,900							
MALE								
All ages	1,934,700	145,096	4,380,173	941,778	41,494,000	923,000	384,430	3,658,393
0 to 14 years	621,700	29,383	1,214,910	277,828	15,063,000	189,900	110,985	1,240,687
15 to 59 years	1,152,100	96,430	2,670,010	542,500	23,531,000	563,900	227,653	2,083,681
60 years and over	160,000	19,283	495,253	121,450	2,898,000	169,200	45,792	334,025
Unknown	900							
FEMALE								
All ages	2,112,700	145,896	4,268,366	934,162	43,079,000	1,246,600	467,185	3,686,467
0 to 14 years	597,000	28,327	1,162,884	266,582	14,598,000	183,500	110,082	1,182,755
15 to 59 years	1,264,700	95,759	2,533,331	533,400	24,854,000	788,900	308,770	2,128,672
60 years and over	250,000	21,810	572,151	134,180	3,626,000	274,200	48,333	375,040
Unknown	1,000							
MALE								
All ages	1,934,700	145,096	4,380,173	941,778	41,494,000	923,000	384,430	3,658,393
0 to 4 years	253,200	9,722	480,226	110,628	5,970,000	50,200	29,541	388,214
5 to 9 years	195,700	9,714	410,977	91,500	4,612,000	59,000	43,653	424,194
10 to 14 years	172,800	9,947	323,707	75,700	4,481,000	80,700	37,791	428,279
15 to 19 years	157,100	12,437	288,990	61,800	4,382,000	63,400	35,579	344,307
20 to 24 years	164,500	11,843	332,953	66,200	3,913,000	51,100	22,331	274,180
25 to 29 years	148,500	10,057	370,130	71,500	3,041,000	44,600	17,241	299,152
30 to 34 years	125,300	10,143	340,162	67,000	2,343,000	44,100	20,580	278,002
35 to 39 years	132,500	12,227	330,605	66,100	2,386,000	51,300	27,688	247,145
40 to 44 years	137,400	12,226	309,626	64,400	2,260,000	77,100	33,798	202,084
45 to 49 years	116,700	11,071	267,786	57,500	2,002,000	88,200	30,474	159,756
50 to 54 years	95,700	8,996	233,389	48,900	1,775,000	79,900	21,659	145,161
55 to 59 years	74,400	7,430	196,369	39,100	1,429,000	64,200	18,303	133,894
60 to 64 years	59,500	6,470	179,561	36,600	1,136,000	58,900	16,345	118,377
65 years and over	100,500	12,813	315,692	84,850	1,762,000	110,300	29,447	215,648

Unknown	900							
FEMALE								
All ages	2, 112, 700	145, 896	4, 268, 366	934, 162	43, 079, 000	1, 246, 600	467, 185	3, 686, 46
0 to 4 years	242, 600	9, 293	458, 098	105, 882	5, 734, 000	47, 900	28, 894	370, 506
5 to 9 years	188, 100	9, 466	394, 074	87, 600	4, 480, 000	57, 500	43, 194	396, 886
10 to 14 years	166, 300	9, 568	310, 712	73, 100	4, 384, 000	78, 100	37, 994	415, 363
15 to 19 years	152, 600	11, 378	274, 653	59, 400	4, 298, 000	64, 200	38, 042	338, 707
20 to 24 years	160, 700	11, 468	304, 938	63, 000	3, 961, 000	56, 000	41, 191	278, 779
25 to 29 years	159, 800	10, 327	337, 597	68, 100	3, 480, 000	65, 600	30, 724	303, 875
30 to 34 years	145, 500	10, 049	324, 430	67, 800	2, 888, 000	71, 000	35, 186	273, 353
35 to 39 years	150, 300	11, 925	317, 768	66, 600	2, 711, 000	80, 800	41, 801	247, 525
40 to 44 years	152, 900	11, 956	288, 414	62, 400	2, 404, 000	115, 500	39, 489	218, 354
45 to 49 years	132, 500	11, 300	244, 044	54, 800	1, 966, 000	117, 500	33, 631	164, 417
50 to 54 years	115, 700	9, 548	229, 501	48, 400	1, 730, 000	111, 200	27, 034	166, 174
55 to 59 years	94, 700	7, 808	211, 986	42, 900	1, 516, 000	107, 100	21, 672	137, 488
60 to 64 years	81, 300	7, 048	188, 544	39, 700	1, 211, 000	95, 900	17, 805	127, 031
65 years and over	168, 700	14, 762	383, 607	94, 480	2, 415, 000	178, 300	30, 528	248, 009
Unknown	1, 000							

TABLE XVII.—*Projected population by age and sex: selected countries or political units*

[Numbers are rounded to the nearest thousand without adjustment to group totals which are independently rounded]

Age and sex	Albania	Bulgaria	Czechoslovakia	Hungary	Poland	East Germany	Rumania	U. S. S. R.	Yugoslavia	Austria
	Jan. 1, 1970	Jan. 1, 1970	Jan. 1, 1970	Jan. 1, 1970	Jan. 1, 1970	Jan. 1, 1970	Jan. 1, 1970	1970	Jan. 1, 1970	1970
BOTH SEXES										
All ages	1,861	9,455	14,493	10,663	34,413	16,990	20,794	282,000	22,134	6,934
0 to 14 years	740	2,850	3,777	2,577	10,754	4,059	6,653	[1] 92,000	7,186	1,374
15 to 59 years	989	5,413	8,436	6,268	19,431	9,293	11,764	[2] 159,000	12,488	4,129
60 years and over	132	1,190	2,280	1,818	4,227	3,637	2,378	31,000	2,459	1,431
MALE										
All ages	931	4,753	7,131	5,180	16,671	7,846	10,193	137,000	10,915	3,275
0 to 14 years	376	1,455	1,929	1,315	5,476	2,073	3,384	[1] 47,000	3,679	709
15 to 59 years	494	2,740	4,191	3,039	9,432	4,313	5,765	[2] 77,000	6,150	1,980
60 years and over	61	557	1,012	827	1,763	1,459	1,045	13,000	1,086	586
FEMALE										
All ages	930	4,701	7,362	5,483	17,742	9,145	10,601	145,000	11,219	3,658
0 to 14 years	364	1,395	1,848	1,262	5,278	1,986	3,269	[1] 45,000	3,507	666
15 to 59 years	495	2,673	4,245	3,229	9,999	4,980	5,999	[2] 82,000	6,338	2,148
60 years and over	71	633	1,268	991	2,464	2,178	1,333	18,000	1,373	844
MALE										
All ages	931	4,753	7,131	5,180	16,671	7,846	10,193	137,000	10,915	3,275
0 to 4 years	143	506	665	446	1,849	772	1,208	[3]	1,292	240
5 to 9 years	125	480	628	440	1,820	690	1,126	[3]	1,231	237
10 to 14 years	108	469	636	429	1,807	611	1,050	[3]	1,156	232
15 to 19 years	90	444	651	427	1,739	529	957	[3]	1,029	238
20 to 24 years	77	345	599	394	1,320	441	736	[3]	840	255
25 to 29 years	60	289	481	373	965	610	652	[3]	748	276
30 to 34 years	62	283	427	344	1,086	686	748	[3]	837	244
35 to 39 years	60	314	438	359	1,145	522	710	[3]	810	220
40 to 44 years	48	332	469	364	1,023	463	688	[3]	682	226
45 to 49 years	42	303	417	286	873	371	456	[3]	515	206
50 to 54 years	31	195	345	168	574	283	375	[3]	264	130
55 to 59 years	24	235	364	324	707	408	443	[3]	425	184

60 to 64 years	26	201	366	286	657	427	400	(3)	392	187
65 years and over	35	356	646	541	1,106	1,032	645	(3)	694	399
FEMALE										
All ages	930	4,701	7,362	5,483	17,742	9,145	10,601	145,000	11,219	3,658
0 to 4 years	138	482	637	427	1,778	737	1,157	(3)	1,226	225
5 to 9 years	121	460	605	422	1,753	661	1,088	(3)	1,174	223
10 to 14 years	105	453	606	413	1,747	588	1,024	(3)	1,107	218
15 to 19 years	88	431	623	412	1,686	513	939	(3)	980	226
20 to 24 years	76	337	580	381	1,292	431	730	(3)	804	245
25 to 29 years	60	278	475	367	950	600	651	(3)	722	270
30 to 34 years	62	272	422	348	1,074	679	739	(3)	808	240
35 to 39 years	60	302	438	365	1,153	538	705	(3)	798	215
40 to 44 years	49	319	484	382	1,204	573	724	(3)	736	240
45 to 49 years	43	296	444	388	1,056	566	528	(3)	646	282
50 to 54 years	32	197	376	231	715	441	449	(3)	332	180
55 to 59 years	25	241	403	355	869	639	534	(3)	512	250
60 to 64 years	29	214	413	310	815	653	497	(3)	431	251
65 years and over	42	419	855	681	1,649	1,525	836	(3)	942	593

See footnotes at end of table.

TABLE XVII.—*Projected population by age and sex: selected countries or political units*—Continued

Age and sex	Belgium	France	Federal Republic of Germany	Italy	Netherlands	Switzerland	Spain	West Berlin	Japan
	1970	1970	1971	1970	Jan. 1, 1970	Jan. 1, 1971	1970	1970	1970
BOTH SEXES									
All ages	8,932	46,117	52,233	51,356	12,134	5,173	31,010	2,267	100,662
0 to 14 years	1,249	11,283	11,512	7,200	2,898	1,072	4,772	342	22,292
15 to 59 years	5,921	26,405	30,342	36,123	7,456	3,089	22,417	[4] 1,486	67,565
60 years and over	1,762	8,429	10,380	8,033	1,780	1,011	3,821	[5] 439	10,806
MALE									
All ages	4,380	22,580	24,938	25,143	6,096	2,520	15,058	1,004	49,874
0 to 14 years	634	5,749	5,923	3,648	1,486	547	2,405	175	11,363
15 to 59 years	2,980	13,259	14,617	17,988	3,764	1,529	10,960	[4] 668	33,359
60 years and over	766	3,572	4,398	3,507	845	443	1,693	[5] 161	5,152
FEMALE									
All ages	4,552	23,537	27,296	26,213	6,038	2,653	15,952	1,263	50,788
0 to 14 years	615	5,534	5,589	3,552	1,411	525	2,367	167	10,929
15 to 59 years	2,941	13,146	15,725	18,135	3,692	1,560	11,457	[4] 818	34,206
60 years and over	996	4,857	5,982	4,526	935	568	2,128	[5] 278	5,653
MALE									
All ages	4,380	22,580	24,938	25,143	6,096	2,520	15,058	1,004	49,874
0 to 4 years	316	1,896	2,022	1,833	505	183	1,183	[6] 69	3,717
5 to 9 years	318	1,883	2,023	1,815	489	178	1,222	[7] 106	3,639
10 to 14 years	325	1,970	1,878	1,823	492	188	1,253		4,007
15 to 19 years	337	2,003	1,791	1,920	513	198	1,230	[6] 35	4,633
20 to 24 years	342	1,876	1,723	2,131	598	208	1,251	[6] 86	5,459
25 to 29 years	267	1,290	1,722	1,813	463	193	1,149		4,677
30 to 34 years	277	1,354	2,157	2,042	407	150	1,072	303	4,230
35 to 39 years	300	1,538	1,729	1,955	404	157	1,254		4,087
40 to 44 years	316	1,566	1,725	1,898	388	159	1,196		3,563
45 to 49 years	332	1,558	1,447	1,749	378	170	1,056		2,582
50 to 54 years	216	820	999	1,188	312	148	791	244	2,100
55 to 59 years	268	1,254	1,324	1,469	301	146	708		2,027
60 to 64 years	251	1,182	1,399	1,270	268	148	607		1,878
65 years and over	515	2,390	2,999	2,237	577	295	1,086	161	3,274

FEMALE									
All ages	4, 552	23, 537	27, 296	26, 213	6, 038	2, 653	15, 952	1, 263	50, 791
0 to 4 years	306	1, 817	1, 904	1, 781	479	175	1, 154	[6] 66	3, 571
5 to 9 years	309	1, 817	1, 909	1, 771	465	171	1, 213	[7] 101	3, 502
10 to 14 years	319	1, 900	1, 776	1, 785	468	179	1, 246		3, 856
15 to 19 years	327	1, 930	1, 702	1, 882	488	191	1, 233	[8] 34	4, 442
20 to 24 years	332	1, 813	1, 648	2, 061	570	202	1, 238	[9] 87	5, 272
25 to 29 years	261	1, 260	1, 069	1, 759	443	189	1, 136		4, 579
30 to 34 years	274	1, 348	2, 100	1, 949	392	145	1, 046	328	4, 153
35 to 39 years	299	1, 506	1, 682	1, 920	390	163	1, 256		4, 041
40 to 44 years	310	1, 523	1, 749	1, 910	382	177	1, 220		3, 669
45 to 49 years	322	1, 557	1, 939	1, 915	386	177	1, 141		3, 110
50 to 54 years	216	845	1, 395	1, 320	322	151	1, 007	369	2, 584
55 to 59 years	281	1, 364	1, 841	1, 634	318	165	934		2, 358
60 to 64 years	280	1, 322	1, 867	1, 441	289	164	755		1, 897
65 years and over	716	3, 535	4, 115	3, 085	646	404	1, 373	278	3, 757

[1] Less than 16 years.
[2] 16 to 59 years.
[3] Not available.
[4] 15 to 65 years.
[5] 65 years and over.
[6] Less than 6 years.
[7] 6 to 14 years.
[8] 15 to 17 years.
[9] 18 to 24 years.

NOTE.—Population projections are not available for Finland, Greece, and the Saar. Population projections by age and sex are not available for Australia and New Zealand. For assumptions underlying the projections shown in this table, see footnotes to table XV

Source for data in tables XV, XVI, XVII

Country or political unit	Number of source reference																	
	Total population			Birth rate			Death rate			Projected population	Age structure	Labor force	Unemployed	Education				Urbanism
	1938	1948	1952	1938	1948	1952	1938	1948	1952					Primary	Secondary	Higher	Technical	
Albania	1	1	3	7	3	3	7	3	3	3	3			28				
Australia	2	1	1	7	1	1	7	1	1	12	7	15	1	29	29	36	29	42
Austria	2	1	1	7	1	1	7	1	1	13	7	15	1	29	29	29	29	43
Belgium	2	1	1	7	1	11	7	1	11	52	7	15	1	29	29	36	29	43
Bulgaria	2	3	3	7	3	3	7	3	3	3	7	16	24	30	30	30	30	44
Czechoslovakia	2	4	4	7	4	3	7	4	3	3	4	15		29	29	36	36	45
Denmark	2	1	1	7	1	1	7	1	1		7	15	1	29	29	29	29	43
Finland	2	1	1	7	1	1	7	1	1		7	15	1	29	29	36	36	43
France	2	1	1	7	1	1	7	1	1	12	7	15	1	29	29	36	29	43
Germany:																		
Federal Republic	2	1	1	7	1	1	7	1	1	12	7	17	1	31	31	31	31	45
Soviet Zone		3	3	8	10	3	8	10	3	3	3	15		29		29		43
West Berlin	2	5	7	7	7	7	7	7	7	14	7	15	25	32	32	32	32	
Greece	2	1	1	7	7		7	7			7	18	18	29	29	29	29	47
Hungary	2	1	3	7	3	3	7	7	3	3	3	19	26	33	33	33	33	48
Ireland	2	1	1	7	1	1	7	1	1		7	15	1	29	29	29	29	43
Italy	2	1	1	7	1	1	7	1	1	52	7	15	1	29	29	36	29	43
Japan	2	1	1	7	1	1	7	1	1	12	7	15	1	29	29	36		43
Luxembourg	2	1	1	7	7	11	7	7	11		7	15	26	29	29	29	29	43
Netherlands	2	1	1	7	1	1	7	1	1	53	7	15	1	29	29	36	29	43
New Zealand	2	1	1	7	1	1	7	1	1	12	7	15	1	29	29	29	36	43
Norway	2	1	1	7	1	1	7	1	1		7	15	1	29	29	29	29	43
Poland	2	6	3	7	6	3	7	6	3	3	6	20	26	34	34	34	34	49
Portugal	2	1	1	7	1	1	7	1	1		7	21	26	29	29	36	29	43
Rumania	2	3	3	7	3	3	7	3	3	3	3	22		35	35	35		50
Saar	2	1	1	7	7	11	7	7	11		7	15	1			30		
Spain	2	1	1	7	1	1	7	1	1	52	7	15	1	29	29	36	29	43
Sweden	2	1	1	7	1	1	7	1	1		7	15	1	29	29	36	36	43
Switzerland	2	1	1	7	1	1	7	1	1	12	7	15	1	29	29	36	29	43
United Kingdom	2	1	1	7	1	1	7	1	1		7	15	1	36	36	36	36	43
U. S. S. R.	3	3	3	9	3	3	3	3	3	54	54	3		37	39	40	41	37
Yugoslavia	3	1	1	7	3	1	7	3	1	3	7	23	27	38	38	38	38	51

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DOCUMENTS EXPEDITING PROJECT

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COMPARISON OF THE PRI
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and the Treasury De

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PROJECT

EVENUE CODE
1954

PRINCIPAL CHANGES
DE BY H. R. 8300 AFTER
SE, SENATE, AND
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13, 1954

nmittee on Internal Revenue Taxation
ry Department

U. S. GOVERNMENT PRINTING OFFICE: 1954

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USED AS A BASIS FOR THE DETERMI-
NATION OF TAX LIABILITY

INTERNAL REVENUE CODE OF 1954

Comparison of the Principal Changes Made in 1939 Code by H. R. 8300 After Action by the House, the Senate, and the Conference

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Item	1939 Code	House
(SUBTITLE A—INCOME TAXES)		
CHAPTER I—NORMAL TAXES AND SURTAXES		
Rate of tax for individuals (sec. 1).	Imposes a normal tax of 3 percent and a surtax ranging from 17 percent to 88 percent on the normal tax and surtax net income, respectively, of individual taxpayers. The distinction between the normal tax and surtax is required by the exemption from normal tax allowed with respect to interest received on certain United States securities.	Provides a rate schedule con mal tax and surtax with rates percent to 91 percent. This change is possible beca the bill provides a 3 percent c with respect to partially tax- thereby eliminating the distinct mal tax and surtax net income.
Tax in case of joint return or head of household (sec. 2).	1. Provides a separate surtax rate schedule for individuals who qualify as heads of households. This separate schedule provides about one-half the benefits of full income splitting to qualified taxpayers.	1. Extends to taxpayers qua of families the full benefits of and eliminates separate rate sch
	2. To be eligible for head of household treatment, the taxpayer must be single and maintain as his home a household which constitutes the principal place of abode for (a) an unmarried child, stepchild, or grandchild, regardless of whether such individual may be claimed by the taxpayer as a dependent, or (b) any other person who may be claimed by the taxpayer as a dependent.	2. To qualify as head of fam must be single and must be e pendency deduction for either h father, mother, brother, or si daughter, father, or mother, spouse. Eliminates place of ment.
Rates of tax on corporations (sec. 11).	Normal tax on corporations is reduced from 30 percent to 25 percent for taxable years beginning after March 31, 1954.	Continues the prior normal porations for taxable years b April 1, 1955. Reduces the ra for taxable years beginning 1955.

ouse	Senate	Conference
dule combining the nor- h rates ranging from 20	House provision.	House provision.
ble because section 35 of ercent credit against tax lly tax-exempt interest, distinction between nor- income.		
yers qualifying as heads efits of income splitting rate schedule.	Deletes House provision and generally restores prior law.	Senate action with the following modifications: 1. Full income splitting is provided a taxpayer for the first 2 years after the death of his spouse if there is a dependent son or daughter (including stepson or stepdaughter) qualifying him for such surviving spouse treatment, that is, the benefits of full income splitting as in the case of a joint return. 2. The provision in prior law requiring the dependent qualifying the taxpayer for head-of-household status to live in the household of the taxpayer is removed with respect to a father or mother of the taxpayer if the parent is a dependent and if the taxpayer maintains a household for the father or mother (but not necessarily the household in which the taxpayer lives). 3. Only those dependents who are relatives of the taxpayer (those specified in the first 8 paragraphs in section 152 (a)) are to qualify a taxpayer for head-of-household treatment. This continues, in effect, the head-of-household provisions of prior law. As a result of the conference action, heads of households will continue to receive half the benefits of income splitting. As under prior law, a taxpayer may claim head-of-household status for a child who does not qualify as a dependent if the taxpayer supplies more than half the cost of maintaining the child in his home. However, other dependents who may qualify a taxpayer for this status must have earnings below $600 and must be close relatives for whom the taxpayer supplies more than half of the support.
l of family, the taxpayer ust be entitled to a de- either his son, daughter, r, or sister, or the son, nother, of his deceased lace of abode require-		
normal tax rate on cor- years beginning before s the rate to 25 percent inning after March 31,	Clarifies House provision so that the 30 percent normal tax rate will apply to taxable years beginning before April 1, 1954, and ending after March 31, 1954.	House provision with Senate modification.

Item	1939 Code	House
Changes in rates during taxable year (sec. 21).	1. Provides specific rules for individuals and for corporations for determining effect of changes in tax rates during the taxpayer's taxable year.	1. For taxable years begin 1, 1954, provides a general payers. Tentative taxes com rates in effect before and af able income for entire ta liability is sum of the propo tative tax which the number after the change bears to th in the full taxable year. 2. For taxable years begin uary 1, 1954, continues pri with respect to individuals.
Dividends received by individuals (secs. 34, 116).	No provision.	1. Provides for an exclusi come of the first $50 of divi an individual during taxable July 31, 1954, and before A the first $100 of dividends re vidual during taxable years 31, 1955. 2. Provides a credit agains respect to dividends receiv in excess of exclusion. Th credit is 5 percent in the cas ceived after July 31, 1954, an 1955, and 10 percent in the received after July 31, 1955. to the lesser of the amount before the credit or the fol the taxable income for the t cent in the case of a taxable January 1, 1955; 7 percent i able year ending after Dece before January 1, 1956; and case of a taxable year endi 31, 1955. 3. In case of dividends re lated investment company, income of such company exc total income, credit and exc only with respect to portion reflects the dividend incom 4. Credit and exclusion are respect to dividends paid ganizations, cooperatives, mu building and loan associatio tions and corporations in U sions, and insurance compan
Retirement income (sec. 37).	No provision.	1. Provides a credit agains to 20 percent (the first brac retirement income up to $1, individual who is 65 years who has received earned i $600 in each of any 10 calen taxable year. This credit (20 percent of $1,200) but tax otherwise due.

House	Senate	Conference
rs beginning after January general rule for all tax- xes computed by applying and after change to tax- ntire taxable year. Tax e proportions of each ten- number of days before and rs to the number of days ear.	1. House provision.	1. House provision.
rs beginning prior to Jan- nues prior law treatment iduals.	2. House provision.	2. House provision.
exclusion from gross in- of dividends received by taxable years ending after efore August 1, 1955, and dends received by an indi- e years ending after July	1. Provides for an exclusion from gross income of the first $50 of dividends received by an individual during taxable years ending after July 31, 1954.	1. Senate provision.
t against tax liability with received by individuals on. The amount of the the case of dividends re- 1954, and before August 1, in the case of dividends 1, 1955. Credit is limited mount of the tax liability the following percent of or the taxable year: 2 per- taxable year ending before ercent in the case of a tax- er December 31, 1954, and 956; and 10 percent in the ar ending after December	2. Deletes House provision for dividends-received credit.	2. Provides a 4-percent dividends-received credit for dividends received after July 31, 1954 (but limits credit to a maximum of 2 percent of taxable income in 1954 and 4 percent thereafter).
dends received from regu- npany, where nondividend pany exceeds 25 percent of and exclusion are allowed portion of dividends which income of the company. usion are not available with paid by taxexempt or- ives, mutual savings banks, ociations, foreign corpora- ns in United States posses- companies.	3. Allows exclusion (but no credit) subject to 25-percent rule in House provision.	3. Allows $50 exclusion and 4-percent credit subject to 25-percent rule in House provision.
	4. House provision with respect to denial of dividends exclusion, with one exception: exclusion is to be available for dividends paid by stock, fire, casualty and title insurance companies taxable under part III of the insurance company provisions. Provision does not apply to credit (since Senate deleted credit).	4. House provision with respect to denial of dividends exclusion, as modified by Senate. House provision with respect to credit. (H. Con. Res. 263 makes credit available for dividends paid by stock, fire, casualty, and title insurance companies taxable under part III of the insurance company provisions.)
t against tax liability equal rst bracket rate of tax) of p to $1,200, received by an years of age or over and rned income in excess of 0 calendar years before the credit is limited to $240 0) but may not exceed the	1. Extends credit to individuals under 65 retired under public retirement system (excluding military retirement systems).	1. House provision as modified by Senate.

Item	1939 Code	House
		2. Retirement income is in and annuities, rents, interes the extent included in gross 3. The amount of retireme the credit is allowed is re amount received as a pensio social security, railroad retir excluded from gross incom amount of earned income in ceived during the taxable by part of pension or annu turn of capital nor by disab 4. No reference to status of
Definition of adjusted gross income (sec. 62).	Defines adjusted gross income as gross income minus certain trade or business expenses of the individual. For employees, expenses deductible from gross income in arriving at adjusted gross income are: (a) expenses in connection with employment which are reimbursed by the employer; and (b) expenses of travel, meals and lodging, in connection with employment while away from home. Deduction of travel expenses is limited to cases where away from home overnight.	Adds to deductions from riving at adjusted gross in tation expenses of employees meals or lodgings) incurred employment whether or no overnight; and (b) business salesmen. "Outside salesma time salesman who solicits his employer's place of bus include a salesman a princ activities consists of service
Definition of taxable income (sec. 63).	Tax rates are applied to normal tax and surtax net income, defined generally as adjusted gross income less certain credits, principally for personal and dependency exemptions, and deductions for medical expenses, charitable contributions, etc., or the standard deduction.	Eliminates the concept of and replaces it with "taxab as gross income less deduct than the standard deductio individuals electing the st "taxable income" is adjuste the standard deduction a personal exemptions. Simplifies income conce "normal tax net income," an cepts in prior law.
Alimony and separate maintenance payments (sec. 71).	Periodic alimony or separate maintenance payments taxed to recipient and deductible by payor if payments are a legal obligation imposed by a court decree or by a written agreement incident to a decree.	Extends prior law trea payments made by a husban a written separation agree cuted before or after date even though they are not court decree, if husband a apart and file separate retu
ANNUITIES (SEC. 72) General method.	Annuitant includes in income amount of annuity payments up to 3 percent of amount paid for the annuity. Amounts received in excess of 3 percent considered return of capital and excluded from gross income until cumulative amount excluded equals amount paid for annuity.	Eliminates 3 percent rule. determined by dividing th the annuity by the annuita when annuity payments b clusion remains unchanged nuitant outlives his life exp

House	Senate	Conference
me is income from pensions interest, and dividends, to in gross income. retirement income on which ed is reduced by (a) the a pension or annuity under oad retirement, or otherwise s income, and (b) by any ncome in excess of $900 re- axable year. Not reduced or annuity representing re- by disability payments. status of nonresident aliens.	2. For taxpayer under 65 retirement income includes only pensions, annuities, and similar retirement pay from public retirement systems. 3. Eliminates reduction of retirement income subject to credit by amounts earned in excess of $900 for individuals over 75 years of age. 4. Denies credit to nonresident aliens.	2. House provision as modified by Senate. 3. House provision as modified by Senate. 4. Senate provision.
ns from gross income in ar- gross income (a) transpor- nployees (but not including ncurred in connection with r or not away from home business expenses of outside salesman" defined as full- solicits business away from e of business, but does not a principal part of whose service and delivery.	House provision.	House provision.
ncept of surtax net income "taxable income," defined s deductions allowed other deduction. In the case of the standard deduction, adjusted gross income less ction and deductions for . e concept by eliminating me," and "net income" con-	House provision.	House provision.
aw treatment to periodic husband to his wife under n agreement, whether exe- r date of bill's enactment, are not separated under a sband and wife are living ate returns.	House provision, but makes it effective only with respect to payments under written separation agreement executed after the date of enactment of bill and extends it to cover payments for wife's support under court decree after March 1, 1954 which would not otherwise be treated as separate maintenance payments.	House provision with Senate modification.
ent rule. Annual exclusion ding the amount paid for annuitant's life expectancy ments begin. Annual ex- changed even though an- life expectancy.	House provision, except for technical modification.	House provision with Senate technical modifications.

Item	1939 Code	House
Joint and survivor annuities.	Taxed under the 3 percent rule on basis of entire consideration paid for the contract. At the death of the primary annuitant, survivor receives a new basis equal to the value of the annuity at that time.	Taxed under life expecta nual exclusions computed by consideration by the combine the parties covered. At death of the first annu continues to compute annual as during the lifetime of t The survivor receives an inc for a portion of any estate t of including the survivor's a of the first annuitant.
Refund annuities.	Taxed under 3-percent rule on the basis of entire consideration paid for contract. Refunds received at death of annuitant excluded to the extent that they constitute return of capital.	Taxed under life-expecta funds are exempt from tax they constitute return of c vision to reduce the cost purposes of computing annu average refund expected.
Employees' annuities.	Taxed under 3-percent rule, like other annuities on the basis of employees' contributions. Fully taxable after exclusions equal employee's contribution.	Taxed under life-expecta amounts payable under the first 3 years equal or exc contribution. In the latter excluded until employee has contributions tax free, and ments are taxable.
Face amount certificates.	Tax status of excess of proceeds over investment not clear.	Continues prior law.
Prizes and awards (sec. 74).	No statutory provision. Administrative practice generally provides for inclusion of prizes in income but court decisions have held certain prizes (on giveaway programs and essay contests) are not includible in income.	Includes in gross incor awards except those made in achievements of a religious tific, educational, artistic, li ture, where recipient is sele on his part and is not requ stantial future services.
Life insurance contracts transferred for a valuable consideration (sec. 101 (a)).	Life insurance proceeds payable by reason of the death of the insured are generally exempt from income tax. However, except for tax-free exchanges, where an insurance contract is transferred for a valuable consideration, the proceeds payable at death are exempt only to the extent of the actual consideration and premiums paid by the transferee.	Exempts in full life insu able at death on contracts valuable consideration.

House	Senate	Conference
expectancy method. Anuted by dividing the total combined life expectancy of	House provision with technical changes.	House provision with Senate technical modifications.
rst annuitant, the survivor annual portions, excluded me of the first annuitant. s an income tax deduction estate tax paid as a result ivor's annuity in the estate	Modifies slightly income tax deduction granted to the survivor as a result of subjecting the survivor's annuity to estate tax (see sec. 691).	
-expectancy method. Reom tax to the extent that rn of capital. Adds pro- cost of the annuity for ng annual exclusions by the cted.	House provision, except for technical modification.	House provision with Senate technical modifications.
-expectancy method unless der the pension plan in the or exceed the employees' latter case, the annuity is oyee has recovered his total ee, and thereafter all pay-	House provision.	House provision.
aw.	Provides that face amount certificates are to be taxed in the same manner as an endowment contract so that where proceeds from such certificates are received in a lump sum the total tax cannot exceed the tax which would be payable if the proceeds had been received in three equal installments: in the year of receipt and in the 2 preceding years.	Senate provision.
s income all prizes and made in recognition of past religious, charitable, scientistic, literary, or civic nat is selected without action not required to render subices.	House provision.	House provision.
ife insurance proceeds paycontracts transferred for a ion.	Restores the prior law treatment and taxes proceeds payable at death on contracts transferred for a valuable consideration to the extent that the proceeds exceed the consideration and premiums paid by the transferee (other than in the case of nontaxable exchanges). However, full exemption is to be granted to such proceeds where the contract is transferred to the insured, a partner of the insured, or a partnership or corporation in which the insured was a partner, shareholder, or officer.	Senate provision.

Item	1939 Code	House
Certain death benefits (sec. 101 (b)).	Excludes from gross income up to $5,000 of payments by one employer to beneficiaries of a deceased employee under a contractual obligation. Law has been interpreted to deny exclusion where the employee has a nonforfeitable right to receive the benefit before death.	Extends exclusion to death under a contract and to dis qualified profit-sharing and s to which deceased had a non prior to death. Limits exclusion to a total ployee, regardless of number viding death benefits.
Life insurance proceeds paid in installments (sec. 101 (d)).	Proceeds of life insurance paid by reason of death are exempt from tax even though they are paid in installments and include interest earned after the death of the insured. Policy dividends or so-called excess interest are not excluded.	Limits the exclusion of in life insurance installment pa death of the insured to $500 a of a decedent and $250 a year f and ancestors of the decede number of policies under wh ments are paid. Interest ea these amounts on such installm taxed. Excess interest is give as guaranteed interest.
EMPLOYER-FINANCED BENEFITS FOR NONOCCUPATIONAL INJURIES AND SICKNESS		
Benefits (secs. 104–105).	1. Benefits under insured plans are excluded. Benefits under noninsured plans are subject to tax to the extent financed by the employer.	1. Benefits paid to employe plans are: (a) exempt in ful pensation for injury or sickne up to $100 a week if paid as loss of wages but reduced by compensation. Treatment of insured plans is identical. T must provide a waiting perio are for loss of wages. They m designed to prevent discrimin age, contributions, and benefit applied in the House bill to plans.

ouse	Senate	Conference
o death benefits not paid l to distributions under g and stock-bonus plans d a nonforfeitable right	House provision, except that exclusion also is granted to death benefits under qualified pension plans (including annuities) where deceased had nonforfeitable right prior to death.	House provision with Senate modification.
a total of $5,000 per em- number of employers pro-		
n of interest earned on ment proceeds after the $500 a year for a widow a year for lineal relatives decedent, regardless of nder which such install- erest earned in excess of installment proceeds are t is given same treatment .	Limits the tax-free exclusion of interest earned after the death of the insured on life insurance paid in installments to $1,000 a year when received by a surviving spouse. No exclusion for other persons.	House provision with Senate modification.
employees under qualified t in full if paid as com- r sickness and (b) exempt paid as compensation for uced by any nonqualified ment of insured and non- tical. To qualify, plans g period where payments They must also meet tests iscrimination as to cover- l benefits, similar to those bill to qualified pension	1. Follows House provision in giving the same treatment to insured and noninsured benefits, but eliminates the necessity of qualifying as a nondiscriminatory plan. Exempts under a plan of employer, employee association or a State sickness and disability fund: (a) benefits reimbursing the employee for expenses incurred during the prior taxable year as well as during the current taxable year for the medical care of himself, his spouse, or his dependents; (b) payments for the permanent loss or loss of use of a member or function of the body or permanent disfigurement of employee, spouse, or dependents, and (c) payments up to $100 a week for loss of wages because of personal injury or illness, without a waiting period and without a reduction for nonqualified compensation.	1. Senate provision with the following modifications: (a) Payments for loss of wages attributable to the first 7 days after an illness are to be taxable but this waiting period will not apply to payments for loss of wages arising from injuries or where an individual is hospitalized for at least 1 day during the period of illness. (b) It is made clear that the exclusion for accident and health benefits is to apply to nonfunded as well as funded employer plans. (c) The Senate amendment which provided that amounts received as reimbursement for medical care are to be excluded if the amounts were expended during the prior taxable year (as well as during the current taxable year) was modified to prevent the individual from taking both a medical expense deduction and the exclusion. As under the Senate provisions, employer-financed accident and health benefits will be fully exempt if they represent reimbursement for actual medical expenses and taxable only to the extent of the excess over $100 if they are compensation for the loss of wages under either an insured or noninsured plan.

Item	1939 Code	House
	2. Exempts allowances received for personal injuries and sickness resulting from active service in Armed Forces.	2. Continues prior law.
Premiums and contributions (sec. 106).	Premiums paid by employers for group sickness and accident insurance usually are exempt from tax to employees but premiums paid on nongroup insurance generally are held to be taxable compensation.	Premiums paid by employe accident plans are exempt.
Rental value of parsonages (sec. 107).	Rental value of a dwelling house or apartment furnished to a minister of the gospel as part of his compensation is excluded from his gross income.	Excludes rental value of a a minister, and rental allowan part of his compensation, to t rent or provide a home.
Discharge of indebtedness (sec. 76 of House bill and secs. 108, 1017).	1. Whether discharge results in income is determined by court developed rules.	1. Discharges of indebtedn for less than full value will to the debtor unless the cre have, because of the nature consummated a transaction of In latter case, discharge ma tribution to capital or reduc price. However, income is al debtor where item forgiven w duction for which he receive which was not included in t creditor.
	2. Corporations may exclude income arising from discharge of indebtedness evidenced by securities if they elect a corresponding reduction in basis of property.	2. Extends prior law provi ness incurred by individual i property used in his trade or nates requirement that debt security.
	3. Railroads may exclude income attributable to cancellation pursuant to bankruptcy or receivership proceedings without making a corresponding reduction in basis of property if cancellation occurs in taxable years beginning before January 1, 1955.	3. Extends provision to D
Income taxes paid by lessee corporation (sec. 110).	It has been ruled that lessor derives additional taxable income from the income tax paid on its behalf by the lessee. This tax is pyramided to the point where the income tax liability of the lessee is greatly in excess of the initial tax on the rental. Lessee allowed a deduction for the income taxes paid on behalf of the lessor.	Payment of taxes by lessee utable to rental payments i lessor's gross income and may by lessee. Applicable only into before January 1, 1954, and lessor are corporations.
Scholarship and fellowship grants (sec. 117).	1. No statutory provision. Administrative rulings provide grant is included in income unless a gift.	1. Excludes grants, includ contributed services and (room, board, and laundry), incidental expenses for trave cal help or equipment to the are expended for these purp

ouse	Senate	Conference
aw.	2. Extends exemption to employees of Public Health Service and Coast and Geodetic Survey.	2. Senate provision.
employers to health and mpt.	House provision.	House provision.
lue of a home furnished allowance paid to him as ion, to the extent used to e.	House provision.	House provision.
debtedness by the debtor ue will result in income the creditor and debtor nature of their dealings, ction of a capital nature. rge may be a gift, con- r reduction of purchase me is always to accrue to given was an accrued de- received tax benefit and led in the income of the	1. Restores prior law.	Senate action.
w provision to indebted- ridual in connection with rade or business. Elimi- at debt be evidenced by	2. House provision.	House provision.
n to December 31, 1955.	3. House provision.	House provision.
y lessee which are attrib- ments is excluded from and may not be deducted e only to leases entered , 1954, where both lessee tions.	House provision.	House provision.
, including the value of and accommodations ndry), plus payments for or travel, research, cleri- t to the extent that they se purposes.	1. House provision.	1. House provision.

Item	1939 Code	House
	2. Administrative rulings make grant taxable in its entirety if services required as condition of receiving grant are more than nominal.	2. Exclusion does not appl research services in nature o ployment required as condit grant. 3. Grants paid to individu candidates for degrees are ta amount of grant plus other o ceived from the recipient's pr is less than 75 percent of reci year preceding grant.
Meals and lodging furnished for convenience of employer (sec. 119).	Meals and lodging are generally taxable to the employee unless furnished for the convenience of the employer. However, even where furnished for the convenience of the employer, meals and lodging are taxed, if there is indication that they are intended to be compensatory.	Meals and lodging (whether as compensation) are to be ex employee's income if they are place of employment and the quired to accept them as a cond ment.
Statutory subsistence allowance received by police (sec. 120).	No provision.	Excludes up to $5 per day re tory subsistence allowance by ployed as a police official by possession of the United States subdivision thereof, or by Columbia.
ALLOWANCE OF DEDUCTIONS FOR PERSONAL EXEMPTIONS (SEC. 151)		
Change in form of deduction.	Dependency exemption is allowed as a credit against net income.	Provides deduction from ad come instead of credit against
Income test for dependent.	Dependency credit restricted to dependents with less than $600 gross income.	Eliminates the $600 gross i child of the taxpayer who has age of 19 or who is a student institution.
DEFINITION OF DEPENDENT (SEC. 152)		
Relationship to taxpayer.	1. Dependent must bear one of the following designated relationships to the taxpayer: (a) son or daughter of taxpayer or descendant of either; (b) stepson or stepdaughter of taxpayer; (c) brother, sister, stepbrother, or stepsister of taxpayer; (d) father or mother of taxpayer or ancestor of either; (e) stepfather or stepmother of taxpayer; (f) son or daughter of brother or sister of taxpayer; (g) brother or sister of father or mother of taxpayer; (h) son-in-law, daughter-in-law, father-in-law, mother-in-law, brother-in-law, or sister-in-law of taxpayer.	1. Adds to the list of qualify (a) any individual supported has as his principal place of a the taxpayer and is a member household, and (b) the taxpa is receiving institutional care physical or mental disability a ing such care was a member of hold as the taxpayer.

ouse	Senate	Conference
ot apply to teaching or nature of part-time em- condition to receiving	2. Extends provision to include "other services" in addition to teaching or research.	2. House provision with Senate modification.
ndividuals who are not s are taxable unless the other compensation re- ient's previous employer t of recipient's salary in	3. Replaces the 75-percent test with a specific exclusion of amounts received up to $300 per month for a maximum period of 36 months from a tax-exempt organization or a government agency.	3. Senate provision.
whether or not intended to be excluded from the hey are furnished at the and the employee is re- as a condition of employ-	Meals are exempt if furnished on the business premises of the employer for the convenience of the employer.	Senate provision.
	Lodging is exempt if: (1) furnished for the convenience of the employer and (2) the employee is required to accept the lodging on the premises of the employer as a condition of employment.	Senate provision.
	Employment contracts or State statutes fixing terms of employment shall not be determinative as to whether meals or lodging are intended as compensation.	Senate provision.
r day received as a statu- ance by a taxpayer em- cial by State, Territory, d States, or any political or by the District of	House provision.	House provision.
from adjusted gross in- against net income.	House provision.	House provision.
gross income test for a who has not attained the tudent at an educational	Extends provision to individuals pursuing "on-the-farm" training programs supervised by accredited schools.	House provision with Senate modification.
qualifying relationships pported by taxpayer who ace of abode the home of member of the taxpayer's e taxpayer's cousin who nal care by reason of a ability and before receiv- ember of the same house-	1. House provision.	1. House provision.

Item	1939 Code	House
	2. A citizen of a foreign country may not qualify as a dependent unless he is a resident of the United States or of a contiguous country.	2. Expands exception to pe claim as dependents noncitize States who are residents of th Panama; and a child who is Philippines and was born to c taxpayer in the Philippines be when he was a member of th Armed Forces.
Support test.	1. Taxpayer must contribute more than one-half the support of a dependent in order to claim dependency credit.	1. Provides that where ov support of a dependent is c group of taxpayers, no one of over half the support, the de tion may be assigned to any provided: (a) each member entitled to the exemption exc port test; (b) the person des tributed more than 10 percen ent's support; and (c) all oth have contributed more than 1 support agree in a written sta will not claim the exemption
	2. Amounts received as scholarships taken into account in applying support test.	2. Provides that in the ca stepchild of the taxpayer w amounts received as scholars taken into account in determi not the taxpayer provided ove support.
Interest on installment purchase (sec. 163).	Provides for the deduction of interest payments. Administrative practice has allowed a deduction for carrying charges on installment purchase if the interest element is separately stated in the purchase contract. Where the amount of the interest is not specifically stated, no interest deduction is allowed.	Provides a deduction for int carrying charges on install whether or not separately stat est charge is not stated, the i to 6 percent of the average un under the contract during the
Taxes (sec. 164).	1. Taxes on real property are deductible only if the taxpayer was personally liable for the tax. Where real property is sold, the purchaser may not deduct a pro rata share of real property taxes assumed under the purchase contract if the seller is personally liable because the lien had attached prior to the sale.	1. Permits buyer and seller t tion of the tax apportionable the year following and preced the date of sale. Special rule extends the pr tionment to cash-basis taxpay and seller are denied a deducti of the tax considered to be imp party.
	2. Special assessments deductible only if levied for interest charges or maintenance costs.	2. Continues prior law.
Losses (sec. 165).	1. A loss from theft or embezzlement is deductible for the year in which the loss was sustained.	1. Loss arising from theft is treated as sustained during in which the loss is discovered

ouse	Senate	Conference
on to permit taxpayer to oncitizens of the United nts of the Canal Zone or who is a resident of the orn to or adopted by the pines before July 5, 1946, ber of the United States	2. In addition to House, provisions, permits United States citizens who are also citizens of another country to be claimed as dependents.	2. House provision with Senate modifications.
here over one-half the ent is contributed by a one of whom contributes , the dependency deduc- to any one of the group member would have been tion except for the sup- rson designated has con-) percent of the depend-) all other members who e than 10 percent of the itten statement that they mption for that year.	1. House provision.	1. House provision.
the case of a child or payer who is a student, scholarships will not be determining whether or ided over half the child's	2. House provision.	2. House provision.
n for interest included in installment purchases, tely stated; where inter- d, the interest is limited erage unpaid balance due ing the taxable year.	Restores prior law.	House provision with technical modifications.
l seller to deduct the por- tionable to the period of l preceding, respectively, s the privilege of appor- taxpayers. Both buyer deduction for the portion o be imposed on the other	1. Provides special rule making apportionment between buyer and seller inapplicable in cases involving accrual-basis taxpayers who have not elected (under sec. 461 (c)) to accrue the real property tax over the period to which it relates.	1. Substantially same as House provision but the cash-basis taxpayer rule is extended to accrued-basis taxpayers who have not made the election under section 461 (c).
aw.	2. Extends deduction to assessments made by improvement districts when (a) the assessments are levied at a uniform rate on the same assessed value of real property as is used for purposes of the local general property tax, (b) the district includes at least one county; and (c) at least 1,000 persons are subject to the taxes levied by the district.	2. Senate provision.
n theft or embezzlement during the taxable year scovered.	1. House provision.	1. House provision.

Item	1939 Code	House
	2. Securities in affiliated corporation which become worthless may be deducted as an ordinary loss. Company is affiliated corporation if taxpayer owns directly at least 95 percent of each class of its stock and more than 90 percent of affiliate's income for all years is from sources other than rent, interest, royalties, dividends, annuities, or gains from securities. 3. Gross income used in applying test under item 2.	2. Ownership test reduced to 8 3. Gross income test changed t test.
Bad debts (sec. 166).	1. Business bad debts fully deductible. Nonbusiness bad debts deductible as short-term capital losses. Business bad debt is defined as a debt related to the taxpayer's trade or business at the time of worthlessness. 2. Foreclosure treated as taxable sale by regulation. Creditor deemed to receive gain or loss on the difference between fair market value of the property and portion of loan satisfied by proceeds of foreclosure sale. Any unsatisfied indebtedness allowed as bad debt deduction.	1. Redefines a business bad created or acquired in connectio payer's trade or business regard the debt is so related at the tim lessness. 2. No gain or loss recognized until creditor disposes of forec Foreclosed property takes the basis and is considered an asset h characteristics as the debt (sec. 1
Depreciation (sec. 167).	1. Provides depreciation allowance for exhaustion, wear and tear (including obsolescence) of property used in trade or business or held for production of income. Provides no specific authorization of any given method for computing allowance. Straight-line method most frequently used, which spreads cost, less estimated salvage, evenly over the estimated service life. Other methods are allowed for certain types of property, including unit-of-production and the declining-balance method subject to limitation of rate to 150 percent of corresponding straight-line rate. 2. No special provision. 3. Rulings prescribe that adjustments to depreciation deductions will be made only on clear and convincing evidence.	1. Liberalizes depreciation o assets constructed or acquired 31, 1953, by specifically permit clining-balance method at 200 corresponding straight-line rat methods which at the end of e in accumulated allowances not i under declining-balance method 2. In case of property constr before and partially after Ja liberalized depreciation is limite of the basis attributable to th after December 31, 1953. 3. Permit (1) agreements in spect to depreciation rates which until significant facts are d burden of proof on party initiat any changes to be prospective 10 percent leeway in which taxp ation of rate will not be disturb
Charitable contributions and gifts (sec. 170).	1. Limits the amount of the deduction by individuals for contributions to charitable, etc., organizations to 20 percent of the individual's adjusted gross income. 2. Does not include gifts to cemetery or burial companies.	1. Permits the deduction of 10 percent of the taxpayer's ad come for contributions to a chu tion or association of churches order, an educational institutio 2. Continues prior law.

use	Senate	Conference
ıced to 80 percent.	2. Ownership test restored to 95 percent.	2. Senate provision.
hanged to gross receipts	3. House provision.	3. House provision.
ss bad debt as a debt onnection with the tax- s regardless of whether the time of its worth-	1. Adds provision for treating as business bad debt a loss sustained by a guarantor, indemnitor, or endorser of a noncorporate debt, where loan is for trade or business of borrower.	1. House provision with Senate addition.
ognized on foreclosures of foreclosed property. kes the debt as its tax n asset having the same ot (sec. 1035).	2. Returns to prior law.	2. Senate action.
ation on new tangible equired after December permitting use of de- at 200 percent of the line rate or equivalent nd of each year result es not in excess of those method.	1. Provides that the depreciation available under other methods is to be limited to the amount available under the declining-balance method only during first two-thirds of life of the asset. Grants taxpayer option to switch to straight-line depreciation at any time, on basis of unrecovered cost less estimated salvage, and remaining life at time of the switch. Specifically authorizes use of the sum-of-the-year's digits method. Restricts liberalized depreciation to assets with service life of 3 or more years.	1. House provision with Senate modifications.
y constructed partially fter January 1, 1954, is limited to the portion le to the construction	2. Makes new depreciation system available to entire cost of construction if completed and first put into use after December 31, 1953.	2. Restores the limitation in the House bill restricting the new depreciation methods to that portion of the basis of the property which is attributable to construction after December 31, 1953.
nts in writing with re- s which will then stand are developed with y initiating change and spective only, and (2) ch taxpayer's determin- disturbed.	3. Deletes the "10 percent leeway" provision.	3. House provision with Senate deletion.
tion of an additional yer's adjusted gross in- o a church or a conven- hurches or a religious stitution, or a hospital. w.	1. Deletes "religious orders."	1. House provision with Senate modification.
	2. Adds nonprofit cemetery or burial companies.	2. Senate provision.

Item	1939 Code	House
	3. Does not provide a carryover of contributions in excess of the maximum percentage allowable for corporations or individuals.	3. Continues prior law.
	4. The 20-percent limitation does not apply where the combination of the taxpayer's charitable contributions and income tax in the current year and in each of the past 10 years equal 90 percent or more of his taxable income.	4. Provides that the 90-per be met in only 9 out of the last
	5. Maximum allowable charitable deduction is decreased by reductions in income for the year attributable to a carryback of the net operating loss.	5. Provides that carryback years is not to reduce ma charitable deduction.
Amortization of bond premiums (sec. 171).	1. Bond premium amortizable to maturity or earlier call date, at taxpayer's election, if interest is wholly or partially taxable. Amortization mandatory for partially tax-exempt bonds in case of a corporation.	1. Premium on callable bo tized to nearest call date onl years from original issue bonds issued after January quired after January 22, 1954
	2. Amortization is mandatory as a reduction of basis but not allowed as a deduction against taxable income for wholly tax-exempt bonds.	2. Same as item 1 above.
	3. Instrument considered a bond only if it has interest coupons or is in registered form.	3. Continues prior law.
	4. Implies that election to amortize in case of bonds held by estate or trust may be made only by fiduciary.	4. Explicitly states that ele in case of bonds held by estat made only by fiduciary.
Net operating loss deduction (sec. 172).	1. 1-year carryback and 5-year carryforward.	1. Extends loss carryback t able years beginning after D
	2. Economic income concept employed in determining losses. Statutory net operating loss reduced, both for loss year and year to which carried, by tax-exempt income, excess of percentage depletion over cost depletion, the excess of nonbusiness deductions over gross income from other sources, the excess of capital losses over capital gains, and the corporate dividends-received credit.	2. Eliminates adjustments interest. Continues adjust exempt items in computing l come of year to which loss is loss is not fully absorbed in ments continue to reduce bal
	3. Disallows carryover of losses by individuals on sale of property used in trade or business.	3. Allows carryover for los realized on sale of property business.
Research and experimental expenditures (sec. 174).	No specific statutory rules. Uncertainty whether particular expenditures are deductible or must be capitalized, particularly where there is no regular research budget. Unusual research expenditures must be capitalized and written off over useful life of benefits or deducted as abandonment losses.	Provides a statutory optio deduct as expense or to amor than 60 months research and penditures. Option is not ap depreciable or depletable asse mentation work.
Soil and water conservation expenditures (sec. 175).	1. Expenditures made by farmers to improve their land are generally required to be capitalized rather than deducted as current expenses. Such expenditures are recoverable for tax purposes only on sale of the land.	1. Permits farmers to ele penditures for soil and water cluding expenditures for pr erosion.
	2. No specific provision.	2. Deductible expenditures are limited to 25 percent of rived from farming. Excess be carried over to succeeding ways to the 25-percent limita

ouse	Senate	Conference
aw.	3. Provides for a carryover for corporations of contributions in excess of 5 percent maximum.	3. Senate provision but makes carryover available for only 2 succeeding years.
e 90-percent test needs to the last 10 years.	4. Provides that the 90-percent test needs to be met in only 8 out of the last 10 years.	4. House provision as modified by Senate.
rryback from succeeding ice maximum allowable	5. House provision.	5. House provision.
able bonds may be amor-late only if more than 3 issue date. Limited to nuary 22, 1951, and ac-22, 1954.	1. Amends House provision to permit ordinary deduction of unrecovered premium on fully taxable bonds callable within 3 years if actually called before maturity.	1. House provision as modified by Senate.
bove.	2. Restores prior law.	2. Senate action.
aw.	3. Eliminates requirement that instrument must have attached interest coupons or be in registered form.	3. Senate provision.
that election to amortize by estate or trust may be y.	4. House provision.	4. House provision.
yback to 2 years, for tax-after December 31, 1953.	1. House provision, but makes the additional year to which a loss can be carried back available with respect to losses for any year ending after December 31, 1953.	1. House provision as modified by Senate.
stments for tax-exempt adjustments for other outing loss but not in in-h loss is first carried. If rbed in first year, adjust-luce balance carried over.	2. Moves further toward a statutory net income approach by eliminating adjustments in both loss year and income year to which loss is carried for the excess of percentage over cost depletion and the deduction for dividends received by corporations.	2. House provision as modified by Senate.
r for losses of individuals roperty used in trade or	3. House provision.	3. House provision.
y option to taxpayers to to amortize over not less rch and experimental ex-s not applicable to land or able assets used in experi-	House provision.	House provision.
s to elect to expense ex-nd water conservation, in-for prevention of land	1. Extends provision to allow deduction of special assessments levied by soil or water conservation or drainage districts to defray expenditures made by such districts which would be deductible under this section if made by the taxpayer.	1. House provision with Senate modification.
nditures for any one year rcent of gross income de-Excess expenditures may ceeding years, subject al-t limitation.	2. House provision.	2. House provision.

Item	1939 Code	House
		3. Deductible expenditures spect to land used in farming moving of earth, including l and terracing, contour furrow of diversion channels and control and protection of wat and ponds, eradication of bru of windbreaks. 4. Deductible expenditures purchase, construction, install ment of structures, appliances character subject to allowance 5. Any expenditures in exc cent limitation must be added time as they become deductibl to which carried.
Farm grain storage expenditures (sec. 176).	No special provision.	No special provision.
Expenses for production of income (sec. 212).	Allows deduction for costs incurred in connection with contests over certain tax liabilities, such as income and estate taxes, but not for gift taxes.	Adds new provision which of expenses incurred in co liability, including gift taxes.
Medical, dental, and similar expenses (sec. 213).	1. In the case of taxpayers other than those over 65 years of age, medical expenses in excess of 5 percent of adjusted gross income are deductible. 2. Maximum deduction is $1,250 per exemption, but not in excess of $2,500 for a single individual or married person filing a separate return, or $5,000 in the case of a married person filing a joint return. 3. Medical expenses deductible include amounts paid for the diagnosis, cure, mitigation, treatment, or prevention of diseases or paid for the purpose of affecting any structure or function of the body (including amounts paid for accident or health insurance). 4. Expenditures for drugs and medicine may be included in medical expenses. 5. Medical expenses are deductible only if paid within the taxable year and no deduction is allowable in the final return of a decedent taxpayer for medical expenses incurred unless they are paid prior to his death.	1. Reduces the percentage 5 percent to 3 percent of adju 2. Increases the maximu $2,500 per exemption, but not for a single individual or ma a separate return, or $10,0 couple filing a joint return or 3. Limits the medical exp items specifically mentioned Also limits deduction of ex required for medical care to tion expenses (and thus excl meals and lodging incurred 4. Expenditures for drug taken into account in comput only to the extent that they e adjusted gross income. 5. Permits deduction in t a decedent taxpayer of me curred, if paid out of esta from date of death (provided estate tax purposes).
Child-care expenses (sec. 214).	1. No provision.	1. Permits deduction of c by a widow or widower, inc individual legally separated a decree of divorce or separat a mother whose husband is inc because mentally or physically

House	Senate	Conference
ditures are those with re-farming, for treatment or luding leveling, grading, furrowing, construction s and drainage ditches, of water courses, outlets n of brush, and planting	3. Revises language to make it clear that the provision applies to earthen dams not subject to depreciation and that the words "construction, control, and protection" apply to all the types of activities enumerated (diversion channels, drainage ditches, earthen dams, watercourses, outlets, and ponds).	3. House provision with Senate modification.
nditures do not include , installation, or improve-pliances, or facilities of a lowance for depreciation. s in excess of the 25-per-e added to basis until such eductible in a future year	4. House provision.	4. House provision.
	5. Deletes House provision.	5. Senate action.
n.	Permits farmers to elect to expense expenditures for farm grain-storage facilities under certain conditions.	Deletes Senate provision.
n which allows deduction l in contesting any tax ft taxes.	House provision.	House provision.
centage requirement from of adjusted gross income.	1. House provision.	1. House provision.
maximum deduction to but not in excess of $5,000 l or married person filing r $10,000 for a married eturn or a head of family.	2. House provision with teachnical revision changing "head of family" to "head of household".	2. House provision with Senate modification and adding to the $10,000 category surviving spouse receiving full income splitting.
cal expense deduction to entioned in the statute. n of expenses for travel care to actual transporta-us excludes expenses for curred during such trip).	3. House provision.	3. House provision.
or drugs and medicine computing the deduction t they exceed 1 percent of e.	4. House provision.	4. House provision.
on in the final return of of medical expenses in-of estate within 1 year provided not deducted for	5. House provision.	5. House provision.
on of child-care expenses wer, including unmarried arated from spouse under separate maintenance, or nd is incapable of support hysically defective.	1. Extends child-care deduction to all working women (including working wives). Married woman must file joint return with her husband.	1. House provision with Senate modification.

Item	1939 Code	House
		2. Defines deductible expens to enable the taxpayer to be e of child less than 10 years of a years old if physically or me tated and unable to attend reg 3. Limits amount deductible
Amounts representing taxes and interest paid to cooperative housing corporations (sec. 216).	Permits stockholders to deduct an amount representing his proportionate share of total amount of taxes and interest paid to a cooperative apartment corporation.	Extends deduction to stock erative housing corporation tests.
Intercorporate dividends (sec. 246).	Allows intercorporate dividends-received credit with respect to dividends paid by insurance companies.	Denies the corporate di deduction with respect to di insurance companies.
Organizational expenditures (sec. 248).	Expenses incurred on behalf of a corporation prior to the date of its charter are not deductible but may be amortized when their useful life can be determined by reference to a limited term of existence specified in the corporation charter.	Corporation may elect to organizational expenses over a than 60 months, beginning wi which the corporation first beg
Intangible drilling and development costs (sec. 263).	Regulations allow taxpayer an option to deduct as current expenses or to capitalize intangible drilling and development costs in the case of oil and gas wells.	No express provision.
Certain amounts paid in connection with insurance contracts (sec. 264).	No interest deduction allowed for indebtedness incurred to purchase a single-premium life insurance or endowment contract. If substantially all premiums on such contracts are paid within 4 years from purchase date, same rule applies.	Extends denial of interest debtedness incurred to purch mium annuity contract, after Amounts deposited for paym tial number of future premium ance, endowment or annuity p as single-premium contracts.
Losses, expenses and interest with respect to transactions between related taxpayers (sec. 267).	1. Losses on sales or exchanges of property and deductions for unpaid expenses or interest are denied in transactions between related taxpayers.	1. Expands concept of rela include (a) a fiduciary deali ficiary of any other trust cre grantor; (b) a fiduciary deali ration controlled by the gran and (c) an exempt organizati a person or his family.
	2. Where losses on the disposition of property are disallowed, no provision is made for adjustment of gain when property is subsequently sold to outsiders.	2. Gain realized by the or on disposition of property, wh disallowed, recognized only t it exceeds the amount of loss lowable to the transferor. Rul wise affect basis of property.

ouse	Senate	Conference
e expenses as those paid to be employed for care ars of age or less than 16 y or mentally incapaci-tend regular school. ductible to $600.	2. Allows deduction with respect to dependent child under 12 years of age and with respect to any other person who is a dependent of the taxpayer and who is physically or mentally incapable of caring for himself. 3. Reduces amount deductible by a working wife by amount by which combined adjusted gross income of husband and wife exceeds $4,500. Thus, no deduction is allowed if the adjusted gross income of husband and wife exceeds $5,100.	2. Senate provision. 3. House provision with Senate modification.
o stockholders of coop-oration meeting certain	House provision.	House provision.
rate dividends-received t to dividends paid by	Deletes House provision denying corporate dividends-received deduction on dividends paid by insurance companies.	Senate action.
lect to amortize certain s over a period of not less ning with the month in first begins business.	House provision.	House provision.
..	Provides clarifying amendment to make clear that provisions relating to capital expenditures do not affect existing treatment under regulations granting option to expense or capitalize intangible drilling and development costs of oil and gas wells.	Senate provision.
nterest deduction to in-o purchase a single-pre-t, after March 1, 1954. for payment of a substan-premiums on a life insur-nuity policy are treated tracts.	House provision except that if contracts involve deposit of borrowed funds, interest deductions shall be denied only where such amounts were deposited after March 1, 1954.	House provision as modified by Senate.
of related taxpayers to ry dealing with a bene-rust created by the same ry dealing with a corpo-he grantor or the trust; rganization controlled by	House provision.	House provision.
the original transferee erty, where loss had been l only to the extent that of loss not previously al-or. Rules does not other-operty.	2. House provision with technical modification.	House provision as modified by Senate.

Item	1939 Code	House
Acquisitions made to evade or avoid income tax (sec. 269).	Authorizes Commissioner to disallow deduction, credit, or allowance not otherwise available to taxpayer where another corporation or its property is acquired principally for purpose of tax evasion or avoidance.	Adds a new subsection which sumption of purpose of tax ev ance where the consideration p corporation or its property is s proportionate to the tax bas acquired plus tax value of oth as loss carryovers.
Limitation on deductions allowable to individuals in certain cases (hobby losses) (sec. 270).	Where deductions with respect to a trade or business claimed by an individual taxpayer have exceeded gross income by more than $50,000 for each of 5 consecutive taxable years, income is recomputed, disallowing deductions in excess of gross income plus $50,000. For purposes of this section, taxes and interest are not included for determining excess deductions.	Excepts from deductions tak for purposes of the provision, and interest, but also casualty ment losses connected with tr losses and expenses of farming table to drought, and expendi taxpayer may elect to expense
Payments to issuer of tax-exempt obligations (sec. 274—House bill).	No provision.	1. Disallows deduction to for rental payments made to governmental units for the u acquired or improved by the go by the issuance of industrial de nue bonds after February 8, 19 2. Industrial development re fined as any obligation issued acquisition or improvement of be used to any substantial exte lessees for manufacturing and pledge the full faith and cred authority for the payment principal.
Distributions of property (including cash) (sec. 301).	1. Shareholders other than a corporation taxed on the fair market value of property distributed.	1. Noncorporate shareholde fair market value of property d
	2. Corporate shareholders are taxed on (a) cash or (b) fair market value of the property with limitation on dividends-received credit.	2. Corporate stockholders a fair market value of property
Distributions and redemption of stock (sec. 302).	1. Subject to income tax where the redemption is substantially equivalent to a dividend; otherwise subject to capital gains tax. No specific rules applied.	1. Provides specific rules go ability of corporate redemptio
		2. Adopts disproportionate provides that, to qualify for ca ment, an individual sharehold common stock after the distr less than 80 percent of his hol distribution. Provides rule for capital gai of interest of a shareholder.

ouse	Senate	Conference
n which establishes pre- f tax evasion or avoid- ration paid in acquiring erty is substantially dis- tax basis of property e of other benefits, such	Changes burden of proof on taxpayer to prima facie evidence of tax avoidance.	House provision with Senate modification.
ions taken into account rovision, not only taxes casualty and abandon- with trade or business, arming directly attribu- expenditures which the expense or to capitalize.	House provisions, but also provides that net operating loss carryovers shall not be taken into consideration for purposes of determining whether losses exceed $50,000. Provides also that in order for new provisions to be applicable, at least 1 year of loss must be subject to provisions of new Internal Revenue Code.	House provisions with Senate modification.
on to private business made to State or local r the use of property y the governmental unit strial development reve- ary 8, 1954. oment revenue bonds de- n issued to finance the nent of real property to tial extent by nonpublic ing and which does not nd credit of the issuing yment of interest and	Deletes House provision.	Senate action.
reholders taxed on the operty distributed.	1. House provision. A statutory rule is provided correlating the basis of property in hands of the distributee with the amount taxed to him.	1. House provision as modified by Senate.
olders are taxed on the roperty distributed.	2. House provision, except that a statutory rule is provided correlating the basis of property in the hands of the distributee with the amount taxed to it.	2. House provision as modified by Senate.
ules governing the tax- emptions in all cases.	1. Reinstates prior law.	1. Continues prior law.
tionateness rule which y for capital-gains treat- areholder's holdings of ne distribution must be his holdings before the	2. House provision with additional provision that controlling shareholder must lose control.	2. House provision as modified by Senate.
ital gain on termination lder.		

Item	1939 Code	House
Redemption of stock to pay death taxes (sec. 303).	Allows redemption of stock in a corporation to pay death taxes without distribution being taxed as a dividend when value of stock amounts to 35 percent of the value of the gross estate.	Broadens provision to prov tion also applies if stock co cent of the taxable estate. Pe to pay funeral and adminis Allows stock of several corpor percentage test if the estate ov stock of the corporations. Extends time for redemptio a decision of the Tax Court ha
Redemption through use of related corporations (sec. 304).	1. Sale of parent's stock to subsidiary may be redemption equivalent to a dividend. 2. No provision specifically taxing a sale of stock between corporations both of which are controlled by the same persons.	1. Continues prior law. 2. Provides that sale of sto owned corporation to another tion equivalent to a dividend.
Distribution of stock and stock rights (sec. 305).	Rules for tax treatment of stock dividends and rights rest on court (constitutional) law. In general, stock distribution is tax free if shareholder's proportionate interest in the corporation is unchanged.	Provides that distributions suant to a reorganization, stock and stock rights in gene Exception is made where the a dividend or in a reorganiza dividends on preferred stock or in arrears, where the sha option to receive property stock is taxable.
Redemption of certain stock (preferred stock bail-outs) (sec. 306).	Stock redemptions subject to income tax if the redemption is essentially equivalent to a dividend. However, law may prove ineffective with respect to so-called preferred stock "bail-outs" (*Chamberlin* v. *Commissioner*, 207 Fed. 2d, 462).	Imposes transfer tax of 85 p poration at time of redempt stock, with certain exceptio within period of 10 years plies tax to presently outst preferred stock.
Basis of stock and stock rights acquired in distributions (sec. 307).	In case of nontaxable stock dividends and rights, basis of original stock is allocated to stock or rights by reference to the comparative market value of the old stock and rights at time of issuance.	Substantially retains prior nontaxable stock dividends a received on reorganizations. able stock and rights may be basis, at election of the taxpa of stock or rights is 15 perce value of the old stock, the bas is required to be allocated.
Taxability of corporations on distributions (sec. 311).	Follows *General Utility & Operating Co.* v. *Helvering* (296 U. S. 200) in providing that a corporation does not realize gain by reason of a distribution of its property the value of which exceeds its cost to the corporation.	The *General Utilities* rule the statute. Two exceptions are made: ventory is distributed, tax i amount of inventory profits tax is imposed on distribution ject to a liability, on the exce the basis of the property.

ouse	Senate	Conference
to provide that this section constitutes 50 percent. Permits redemption administrative expenses. corporations to meet the estate owns 75 percent of ns. demption to 60 days after Court has become final.	House provisions, but adds provision allowing estate to redeem new stock it receives for old stock held by decedent, if basis of new stock is determined by reference to basis of old stock.	House provision as modified by Senate.
w.	1. Continues prior law.	1. Continues prior law.
e of stock of one wholly another may be redemp- vidend.	2. House provision.	2. House provision.
ibutions (whether pur- ation, or otherwise) of in general be nontaxable. ere the stock received as rganization is in lieu of d stock currently owing the shareholder has the perty or money. Such	House provisions except for stock dividends on preferred stock which is in arrears for years prior to the preceding taxable year. Stock dividends received for such prior year arrears are nontaxable upon receipt but may be taxable as section 306 stock upon sale or redemption. Continues rule of House provision and prior law where stock dividends are received in lieu of cash. Section is limited to nonreorganization situations.	House provision as modified by Senate.
of 85 percent on the cor- redemption of preferred exceptions, if redeemed years of issuance. Ap- outstanding issues of	Imposes tax on shareholder selling or redeeming dividend preferred stock at the rates applicable to ordinary income, to the extent of such stock's allocable share of corporate earnings at time of issuance, if sold, or at time of redemption, if redeemed. Certain exceptions are made for cases where all common stock is also disposed of, and where the disposition of the preferred is not for tax avoidance purposes. Applies only to stock dividends issued after June 22, 1954.	Senate provision.
s prior law for basis of dends and basis of stock ations. Basis of nontax- may be zero or allocated e taxpayer. If the value 5 percent or more of the the basis of the old stock ated.	House provision, but makes section applicable only to stock and stock rights issued as a dividend.	House provision as modified by Senate.
es rule is incorporated in	House provisions.	House provision.
made: (1) if LIFO in- l, tax is imposed on the profits postponed; (2) ributions of property sub- he excess of the debt over rty.		

Item	1939 Code	House
Effect of distributions on earnings and profits (sec. 312).	1. No statutory rules as to appropriate adjustments made when property which has appreciated or depreciated in value since acquisition is distributed to shareholders.	1. No definition of earning rules for adjustment in certain and profits charged with cost o by the corporation. If, for e worth $100 but costing $50 is earnings and profits of $75, ea would be reduced by $50. If inventory type assets dis and profits increased by the market value over cost. Ear are reduced by the fair mar taxable dividend. Corporatio difference between cost and va
	2. No provision.	2. No provision.
Corporate liquidations (secs. 331–338).	1. In general, the excess of the fair market value of property received over the cost of stock is taxed to the shareholder as a capital gain. The fair market value of the assets received becomes the shareholder's basis.	1. Unrealized appreciation ceived upon liquidation woul shareholder or corporation. shareholder owning stock wit receives property with a valu basis to the corporation of $2 the excess of $200 over $100, gains rates. Where, however property to the corporation is equal or greater, than the to the shareholder, the basis received would become the b Complicated rules would ap tory type asset distributed.
	2. In general, where the liquidating corporation is a subsidiary, no gain or loss is recognized, and the basis of property received by the parent is the same as it was in hands of the subsidiary.	2. Any loss would be a cap gain would be treated as a div dividend-received deduction would apply. Basis rules a above.
	3. Provides, at election of taxpayer, that liquidation of a corporation may be completed without taxing the unrealized appreciation of the property of the corporation. The accumulated earnings and profits of the corporation are taxed to the shareholder as a dividend.	3. This provision is adopted except that the shareholder v capital gains rates on the exce tion basis over the basis of his
	4. Under certain conditions, corporation itself may be held taxable on any gains realized at liquidation. (*Commisioner* v. *Court Holding Co.*) This hinges on the question of whether the corporation itself or the stockholders made the sale.	4. If a corporation in pa liquidation sells assets, there at the corporate level. Howe ized would be taxed to shareh income or gain, depending on the asset sold. (For special inventory assets, see below.)

House	Senate	Conference
earnings and profits but n certain cases. Earnings th cost of asset distributed If, for example, property g $50 is distributed out of f $75, earnings and profits 550. ssets distributed, earnings by the excess of its fair st. Earnings and profits fair market value of the rporation not taxed on the t and value.	1. House provision.	1. House provision.
	2. Insures that any distribution of the proceeds of loans guaranteed by the United States, such as F. H. A. loans, which exceed the cost of the property by which such loans are secured is taxed as a dividend.	2. Senate provision.
eciation of property re-on would not be taxed to ation. If, for example, a tock with a basis of $100 h a value of $250, and a on of $200, he is taxed on r $100, or $100, at capital however, the basis of the oration is less, but value an the basis of the stock he basis of the property e the basis of the stock. ould apply where inven-uted.	1. Reinstates prior law.	1. Continues prior law.
be a capital loss but any as a dividend to which a duction of 100 percent rules as described in 1,	2. Retains prior law provisions. However, where a parent purchases the stock of a subsidiary and adopts a plan of liquidation within 2 years, the basis of the assets in the hands of the parent is to be the amount paid for the stock (*Kimbell-Diamond Milling Co.*), subject to certain adjustments.	2. Senate provision, with minor amendment covering adjustments.
adopted as a general rule, nolder would be taxed at the excess of the corpora-is of his stock.	3. Provision of prior law is made permanent.	3. Continues prior law with change in date from August 15, 1950, to December 31, 1953, after which stock or securities acquired by liquidating corporation are treated as money.
in partial or complete s, there would be no tax However, any gain real-o shareholder as ordinary ding on the character of special rules governing elow.)	4. Follows House provision but limits rule to complete liquidations. If a corporation adopts a plan of liquidation and liquidates within 12 months, sale of assets would not result in tax at the corporate level. Inventory must be sold in bulk to receive this treatment.	4. Senate provision, with provision for (1) supplemental election under section 392 (b) for firms adopting plan of liquidation after December 31, 1953, and before June 22, 1954, and (2) nonrecognition of gain on inventory of one trade or business of the corporation sold to one person.

Item	1939 Code	House
Collapsible corporations (sec. 341).	Under certain conditions, shareholder taxed at ordinary income rates on corporate liquidations of inventory type assets where it can be shown that the corporation was deliberately availed of for tax avoidance purposes. Applies only where shareholder owned 10 percent or more of stock, and 70 percent or more of the gain in taxable year is attributable to the inventory type property.	Certain "appreciated" inve would not be taxed at time o tribution. However, such as the same basis in hands of the subsequent sale would be full preciated inventory" must ha value by more than 20 perce more than 10 percent of the assets of corporation.
Partial liquidations (sec. 346).	Same rules as in case of complete liquidations. No statutory standards to distinguish a partial liquidation from a distribution essentially equivalent to a dividend.	Applies general liquidation liquidations. Test of partia quires that there be a termina separate and active businesses. nated must have been separate at least 5 years, and separate b kept of the separate businesses
Corporate organizations (sec. 351).	No gain or loss where one or more persons transfer property to a corporation and immediately after the transfer such persons are in control of the corporation. Interest of such persons after the transfer must be in substantially the same proportion as was the respective interest of such persons in the property. If disproportionate, the entire transfer is taxable.	Limits disproportionate ru to the extent of disproportiona
Distribution of stock and securities of a controlled corporation (sec. 355).	1. Stock of a newly created subsidiary may be distributed tax-free to shareholders of the parent corporation, provided that it is intended to continue in active business the corporation whose stock is distributed and that the distribution is not used as a device for distributing earnings and profits.	1. Extends prior law treat an existing subsidiary. Such tion is also permitted even thou is an inactive corporation w its income from investments, p disposition of such stock with give rise to ordinary income ta
	2. No provision.	2. Transferee corporation m controlled by persons who were the transferor. For example, ferred their separate sole pro corporation in which each rec of the stock, these businesses m rated into corporate entities wholly owned by A and one by
Reorganizations (sec. 368).	1. Reorganization defined: (1) Merger or consolidation; (2) acquisition by one corporation of 80 percent of the stock of another corporation solely for voting stock; (3) acquisition by one corporation of substantially all the assets solely in exchange for voting stock; (4) transfer where transferor or its shareholders in control of new corporation; (5) recapitalization; (6) change in identity, form or place of organization.	1. Provides new definition of sitions and different rules f closely held corporations; also ing corporation had to issue stock to transferor's shareholde is a closely held corporation.
	2. Additional consideration taxed to extent of gain.	2. Taxed as a distribution w fact that it is made pursuant tion.
	3. No statutory rules for exchange of securities for securities.	3. No gain or loss if securitie same face amount as securit Any excess of the face amount ceives over the fact amount o rendered treated as additiona

ouse	Senate	Conference
d" inventory type assets time of liquidating dis- such assets would retain s of the recipient, so that be fully taxable. "Ap- nust have appreciated in 0 percent and constitute of the value of the total	Retains approach of prior law. Applies to shareholder owning more than 5 percent (rather than 10 percent) of the stock of such a corporation. Also provides a presumption that a corporation is a collapsible corporation where at least 50 percent of its assets constitute inventory which has appreciated in value by 20 percent or more. Broadened to cover specifically distributions by the corporation as distinguished from the sale, exchange of the stock or liquidation of the corporation.	Senate provision, with minor amendment covering Government discount obligations.
iidation rules to partial partial liquidation re- termination of one of its sinesses. Business termi- separatedly operated for parate books and records sinesses.	Continues prior law but adds a provision for partial liquidation if active business conducted for 5 years is terminated. Eliminates requirement for separate books and records.	Senate provision.
nate rule. Taxed only portionate interest.	House provisions.	House provisions.
w treatment to stock of Such tax-free distribu- ven though the subsidiary ation which receives all ments, provided that any ock within 10 years will ncome tax treatment.	1. Returns to prior law generally in permitting only the tax-free separation of an active business. Bill requires that both the business retained by the distributing company and the business of the corporation the stock of which is distributed must have been actively conducted for 5 years preceding the distribution, and that the distribution is not a device for the distribution of earnings or profits.	1. Continues prior law with additional rules for determining when a corporation is engaged in the active conduct of a trade or business. Also amended to the effect that the mere fact that after the distribution stock or securities are sold by the distributees shall not be construed to mean that the transaction was principally used as a device to distribute earnings. (Unless the sale was negotiated or agreed upon prior to the distribution.)
ration may be separately who were shareholders of xample, if A and B trans- sole proprietorships to a each received 50 percent nesses may again be sepa- entities one of which is l one by B.	2. House provision.	2. House provision.
nition of corporate acqui- rules for publicly and ns; also rule that acquir- o issue 20 percent of its areholders if either party ration.	1. Eliminates difference between publicly and closely held corporations, also 20 percent rule. Returns to prior law but (1) allows assets acquired to be transferred to a subsidiary; and (2) some additional consideration where assets acquired.	1. Prior law as amended by Senate.
bution without regard to ursuant to a reorganiza-	2. Continues prior law.	2. Continues prior law.
securities received are of securities transferred. amount of securities re- mount of securities sur- dditional consideration.	3. House provision.	3. House provision.

Item	1939 Code	House
Carryovers in certain corporate acquisitions (sec. 381).	No provision made for transfer from one corporation to another, in a tax-free liquidation or reorganization, of the major tax benefits, privileges, elective rights, etc., which were available to the predecessor. Courts hold in general that such tax attributes of a corporation may be preserved only by continuing the corporation's identity. More recently, however, this separate identity rule has not always been followed.	Provides for the carryover of attributes or items from one another in the complete liquid sidiary and in certain tax-free New rules enable successor corp into "tax-shoes" of predecessor loss carryover, earnings and elections, etc.
Special limitation on net operating loss carryover (sec. 382).	No specific provision. Where controlling interest in a corporation is acquired for purpose of avoiding or evading tax liabilities, the tax benefits so acquired which are otherwise not available may be disallowed (sec. 129). Ineffectual because of necessity of proving that tax avoidance was the principal purpose of the acquisition.	Where 50 percent or more of ing interest in a corporation is owners, the amount of net opera may be carried over is to be percentage of new ownership ac
Effective date (secs. 391–395).	Provisions continue applicable except as changed in bill.	Provisions relating to distrib fers pursuant to a reorganizati apply to transactions occurring 1954. Liquidation rules apply plans adopted after March 1, 19
PENSION, PROFIT-SHARING, AND STOCK-BONUS PLANS—		
Special treatment for qualified plans (secs. 401–404, and 501 (a)).	Where plans do not discriminate in favor of highly compensated employees, covered employees defer payment of tax until they receive benefits. Employers deduct contributions currently. Any trust established to administer the plan is exempt from tax.	Continues prior law.
Qualification requirements (sec. 401).	Plans may qualify by covering 56 percent of regular employees. Most plans qualify by receiving approval of the Commissioner without satisfying any requirement as to percentage of employees covered.	Attempts to establish clear-cu firms to know whether particul without waiting for ruling b Revenue Service. For examp more than 20 employees auton coverage requirements if they of employees.

use	Senate	Conference
yover of 16 specific tax om one corporation to e liquidation of a sub- ax-free reorganizations. sor corporations to step lecessor with respect to gs and profits, certain	House provisions. Adds two new items to the list of carryover items.	House provisions, including Senate additions, with amendments governing (1) differences in inventory methods and (2) carryover of excess charitable contributions.
more of the participat- ation is acquired by new et operating loss which s to be reduced by the rship acquired.	House provision with two changes: (1) Loss carryover is completely eliminated but only if 50 percent or more of stock is acquired by purchase in two years and the corporation does not continue the business which resulted in the loss. (2) In tax-free reorganizations, if shareholders of the loss corporation acquire less than 20 percent of the stock of the new corporation, the loss carryover is reduced proportionately. Thus, if they acquire 10 percent of the stock, only 50 percent of the carryover is available to the successor corporation.	Senate provisions, with amendments defining (1) "purchase" and (2) stock ownership in cases of corporate shareholders.
distributions or trans- ganization or otherwise ccurring after March 1, s apply with respect to rch 1, 1954.	Provisions made generally applicable in the case of reorganizations on or after June 22, 1954. Plans of reorganization adopted before June 22, 1954, may be completed under the 1939 Code. Where a plan of reorganization was submitted to the Secretary for ruling prior to June 22, 1954, and where the plan of reorganization was not adopted before that date, an election to have the 1939 Code or the 1954 Code apply is available. If a plan of reorganization was adopted— (a) after March 1, 1954, and before June 22, 1954, or (b) before June 22, 1954, in pursuance of a court order and all distributions under the plan occur after March 1, 1954, and before July 1, 1954, the election is also available.	Senate rules governing reorganizations. Adopts June 22, 1954, date for all provisions of subchapter C generally.
	Continues prior law.	Continues prior law.
clear-cut rules to enable particular plans qualify uling by the Internal example, plans with s automatically satisfy f they cover 25 percent	Eliminates changes in House provision as to qualification requirements; restores qualification rules of prior law.	Senate action.

Item	1939 Code	House
Treatment of nonqualified plans (secs. 402–404).	Under nonqualified plans, if employees have nonforfeitable rights at the time of contribution they are taxed currently on employers' contributions and the employer receives a current deduction for his contribution. If employees have forfeitable rights they defer payment of tax until they receive benefits and employer can never take deductions for his contributions.	Under nonqualified plans e be taxed when they receive be of whether their rights are fo Employers would get deductio tributions when employees rece
Integration requirements (sec. 401).	Under certain circumstances an otherwise discriminatory plan may be required under regulations to integrate benefits with social security payments. Benefits under the plan may be confined to wages in excess of amounts covered by social security provided such benefits are not relatively greater than those granted by social security at the $3,600 wage level.	Eliminates integration requi pension plans, the first $4,000 o proximating social security c ignored in establishing benefit sharing and stock-bonus plans cluding the first $4,000, must b sideration in allocating 75 per tions. However, the contribut cannot be more than twice as income employees as for lower
Negotiated plans established during period of Government operation (sec. 404).	No special provision for negotiated plans established in periods of Government operation and seizure. Where such plans do not qualify, and employees have forefeitable rights, employers may not receive deductions for contributions.	No special provision.
Treatment of lump-sum distributions (secs. 402 and 403).	Lump-sum distribution, made by qualified plans to employees because of separation from service, taxed as capital gains if plan is trusteed. Similar distributions from insured plans are taxed as ordinary income. Lump-sum distributions by all plans to beneficiary of employee who dies after retirement not eligible for capital gains treatment.	Extends capital gains treatm distributions made by qualifie because of separation of servic treatment also granted lump-s made by all qualified plans to employees who die after retiren sum distributions resulting fro plan through mergers.
Deductions for affiliated corporations (sec. 404).	Affiliated corporations cannot shift deductions for contributions to profit-sharing plans. For example, if one member of the group has no accumulated earnings or profits, it could not make a contribution to its profit-sharing plan and no other member of the group could make contributions on its behalf.	Members of an affiliated grou are permitted to take deductio tions to the profit-sharing pl corporation which cannot mak tions itself because it has no p lated earnings. The membe quired to divide the deductio tributions in proportion to th
Foreign situs trust (secs. 401, 402, 404).	A foreign situs trust may qualify if it meets all the usual conditions and in addition has no United States source income.	Provides that a foreign situs may not qualify for tax exem advantages of a qualified plan gains) are extended if the would qualify for exemption.
Taxpayers on accrual basis (sec. 404).	Taxpayers on accrual basis must make contributions to the plan not later than 60 days after the close of the taxable year in order to deduct such contributions in the taxable year.	Extends date for making accrual taxpayers to 75 days a taxable year plus any extensi date.
Employee stock options (sec. 421).	1. The effects of reorganizations of employer corporations on restricted stock options uncertain. 2. Variable price options difficult to qualify under this section.	1. Under certain types of employees' benefits under an protected. 2. Provides rules appropri price options consistent with th

ouse	Senate	Conference
plans employees would eceive benefits regardless ts are forfeitable or not. deductions for their con- yees receive benefits.	Eliminates changes made by House provision and restores prior law treatment of nonqualified plans.	Senate action.
on requirements. Under $4,000 of wages paid (ap- curity coverage) can be benefits. Under profit- as plans all earnings, in- , must be taken into con- 75 percent of contribu- ontribution to wage ratio twice as high for high- or lower-paid employees.	Eliminates House changes, restores prior law.	Senate action.
.	Allows employers to deduct contributions to nonqualified plans established prior to January 1, 1954, as the result of Government operation and seizure even if employees' rights are forfeitable.	Senate provision.
s treatment to lump-sum qualified insured plans f service. Capital gains lump-sum distributions plans to beneficiaries of retirement and to lump- ting from liquidation of	House provision except for revisions in the type of terminations of plans through mergers so as to confer capital gains treatment only in situations resulting in total distributions in 1954 on account of the termination of the plan as a result of the liquidation of the employer corporation prior to January 1, 1954.	House provision as modified by the Senate with minor changes in the type of terminations of plans through mergers so as to confer capital gains treatment as a result of the liquidation of the employer corporation prior to date of enactment.
ed group of corporations deductions for contribu- ring plan of a member not make such contribu- as no profits or accumu- members would be re- deduction for such con- n to their total profits.	House provisions except that (1) the provision is extended to stock bonus plans where the employer's contribution is based on a percentage of profits and (2) where an affiliated group of corporations actually file a consolidated return, they would not be required to divide deductions for contributions on behalf of a loss member in proportion to their respective profits.	Senate provision.
gn situs employees' trust ax exemption but other ed plan (except capital if the trust otherwise ption.	House provisions but extends the treatment to allow capital gains under same conditions as apply to a qualified domestic trust.	House provision as modified by Senate.
aking contributions by 5 days after close of the extension of the filing	House provision.	House provision.
pes of reorganizations, der an option are to be	1. Expands the House provision to include more types of reorganizations.	1. House provision as modified by Senate.
ppropriate to variable with the whole section.	2. Limits House provisions by redefining a variable price option as an option where value of the stock is the only variable.	2. House provision as modified by Senate with further proviso that the value of stock can be taken into account only in a 6-month period including the date the option was exercised.

Item	1939 Code	House
	3. No restriction on exercise period of option.	3. Options granted after De not be exercised over more period.
	4. The modification, extension, or renewal of an option requires that the option price qualify under the highest value of the stock from the time of the issuance of the initial option to the time the new option is issued.	4. Upon the modification, newal of an option after Dec. value of the stock at that time
	5. The tax treatment of a restricted stock option exercised by an estate or beneficiary of an employee is uncertain.	5. Permits the estate or ben cise a restricted stock option.
Accounting periods and methods of accounting (secs. 441–482).	1. Many differences between rules for computing income for tax purposes and rules for computing income for business purposes under generally accepted accounting principles. Differences necessitate much administrative work and elaborate reconciliations.	1. Would bring tax rules co and deductions into harmony counting, thereby eliminating necessity for taxpayers to mai records. Provides realistic income for tax purposes in sound business practices.
	2. Tax rules generally do not permit the deferral of income beyond year of receipt and tend to delay beyond the appropriate year deductions for expenses and losses.	2. Permits accrual-basis tax port prepaid income as earned ditions to reserves for estimate related to the income of the ta
	3. Real property taxes generally are allowable as deductions only on date when tax becomes a legal liability by reason of lien.	3. Requires accrual-basis tax real property taxes ratably ov which the tax is levied.
	4. Transitional adjustments resulting from involuntary changes in accounting methods are the subject of conflicting court decisions.	4. Provides that necessary justments will be made in al counting method.
	5. Certain income is double taxed when taxpayer changes from accrual to installment method of reporting income.	5. Alleviates double taxation ing from a change from accru method by providing a tax c in which income is included a
Tax-exempt corporations (secs. 501–526).	1. Exempt pension trusts classified in separate section of code.	1. Classifies exempt pension eral group of exempt organiza
	2. Charitable, religious, educational, and certain other nonprofit organizations are exempt from income tax if no part of the net earnings inures to any private shareholder or individual.	2. Continues prior law.
	3. Charitable, religious, and educational organizations may not be exempt if a substantial part of their activities is the carrying on of propaganda, or otherwise attempting to influence legislation.	3. Continues prior law.
	4. Charitable, religious, and educational organizations are exempt only if they are operated exclusively for such purposes. Organizations on the Attorney General's list of subversive organizations are deemed not to be entitled to exemption.	4. Continues prior law.

ouse	Senate	Conference
after Dec. 31, 1953, may r more than a 10-year	3. Applies House provision to options granted after June 18, 1954.	3. House provision as modified by Senate (Con. Res. 263 changed this date to June 22, 1954).
cation, extension, or re-er Dec. 31, 1953, only the at time governs.	4. House provision made applicable only if the value of the stock has decreased 20 percent or more over the preceding 12-month period.	4. Senate provision.
e or beneficiary to exer-option.	5. House provision, but provides that a transfer of stock purchased by an estate under an option to heirs or beneficiaries will be deemed a disposition for purposes of taxing as ordinary income, gains under options issued at less than 95 percent of value of stock.	5. House provision with Senate modifications.
rules concerning income armony with business ac-inating to a great extent s to maintain two sets of alistic computation of oses in conformity with es.	1. House provision.	1. House provision.
asis taxpayers to (a) re-s earned; (b) deduct ad-stimated future expenses f the taxable year.	2. Makes only technical and clarifying amendments.	2. House provision with Senate modification.
basis taxpayers to deduct tably over the period for l.	3. Makes section on accrual of real property taxes elective.	3. House provision with Senate modification.
ecessary transitional ad-le in all changes of ac-	4. Bars transitional adjustments in future changes of accounting method with respect to errors made in years prior to years under the bill.	4. House provision with Senate modification.
taxation of income result-m accrual to installment a tax credit in the year luded a second time.	5. House provision with technical revisions.	5. House provision with Senate modification.
pension trusts with gen-rganizations. aw.	1. House provision.	1. House provision.
	2. Adds to list of exempt organizations nonprofit organizations devoted to testing products for public safety.	2. Senate provision.
aw.	3. Prohibits exemption if the organizations participate in, or intervene in, any political campaign on behalf of any candidate.	3. Senate provision.
aw.	4. Denies exemption to religious, charitable, and educational organizations which make a donation to a subversive organization or a subversive individual. Donations to an individual are not proscribed if made solely for certain charitable purposes.	4. Continues prior law.

Item	1939 Code	House
	5. Charitable and certain educational organizations are not entitled to exemption if, after July 1, 1950, they engage in certain prohibited transactions such as lending money without adequate security and at less than reasonable rate of interest to substantial contributors (or certain other persons). Pension, profit-sharing, and stock-bonus plans are not subject to these provisions.	5. Pension, profit-sharing, a trusts made subject to prohibit test for transactions after Marc
	6. Denies exemption to charitable and certain educational organizations if accumulations of income are unreasonable in amount or duration.	6. Adds pension trusts to org ited by accumulation rule.
	7. Educational and charitable organizations, labor unions, and business leagues are required to pay income tax on unrelated business activities and certain income from rental real estate leased for more than 5 years and carried with borrowed funds (Supplement U income). Where more than 50 percent of property is leased under short-term leases, tax on rentals does not apply, provided, no lessee occupies over 10 percent of the property on a long-term lease.	7. (a) Makes pension trusts lated business income-tax requi able years beginning after (b) Amends lease rules to mak in sixth and succeeding years w not had a lease for more than 5 pies property for more than 5 rule of a constructive long-ter years of occupancy is not appli ing whether for purposes of the this section less than 50 percent is under long-term lease.
Investment diversification for employees' trusts (sec. 505, House bill).	Plans required to be for exclusive benefit of employees. No requirement for diversification of investments.	Various restrictions on inves ample, investment of employees' ties of any one company ma percent of the value of the trust than 10 percent of the voting po of the company.
Corporations improperly accumulating surplus (secs. 531–537).	1. Special tax (rates 27½ percent and 38½ percent) imposed on retained earnings of any corporation formed or availed of for the purpose of avoiding the individual surtax on stockholders by accumulations of earnings beyond the reasonable needs of the business.	1. Provides an exemption fo tion which is publicly held (r shareholders and less than 10 pe any one family).

use	Senate	Conference
aring, and stock-bonus prohibited transactions er March 1, 1954.	5. House provision on trusts except that special rules are provided for loans made by employees' trusts which were made without adequate security and at less than reasonable rate of interest prior to March 1, 1954. Such loans may not be continued beyond December 31, 1955, if payable at demand or if renewed after March 1, 1954. If a specific date of repayment was fixed prior to March 1, 1954, the loan may continue to its due date or to December 31, 1955, whichever is later. Adds agricultural research organizations to those organizations not subject to prohibited transactions rule.	5. House provision with Senate modifications.
s to organizations lim-le.	6. Deletes pension trusts from coverage of accumulation rule. Amends prior law to provide that rule will not apply to income from property of a decedent dying before January 1, 1951, which is transferred under his will to a trust created by such will. Also permits unlimited accumulation for duration of lives of persons designated in the trust instrument plus 21 years in the case of a trust created by will of a decedent dying after December 31, 1950, if will creating trust requires accumulation.	6. Senate provision.
trusts subject to unre-x requirements for tax-after June 30, 1954. to make tax applicable years where tenant has e than 5 years but occu-than 5 years. (c) The long-term lease after 5 ot applied in determin-s of the exemption from percent of the property e.	7. (a) Adds section to make clear that pension trusts will not be subject to tax on rental income where indebtedness for property rented was incurred before March 1, 1954, and property was leased before such date. Also, provides that any indebtedness incurred after such date to improve such property as required by terms of lease made before such date shall not result in taxation. Where loans are made by one trust to another trust of the same employer to carry real estate, such borrowing will not be treated as indebtedness for purposes of the tax on rental income, unless the first trust incurs indebtedness to make the loan. (b) House provision. (c) Amends House bill to provide that in determining whether less than 50 percent of property is under long-term leases, if a lease of less than 5 years is renewed during the last half of its term, the unexpired portion of the first lease will not be added to the second to determine whether or not the second lease is a long-term lease.	7. House provision as modified by Senate.
on investments, for ex-ployees' trusts in securi-any may not exceed 5 he trust's assets or more oting power of the stock	Eliminates House changes and restores prior law.	Senate provision.
ption for any corpora-held (more than 1,500 an 10 percent owned by	1. Deletes House provision.	1. Senate action.

Item	1939 Code	House
	2. Reasonable needs of the business not specifically defined in statute.	2. Redefines reasonable need to include "reasonably anticipa quirements.
	3. Burden of proof as to reasonableness is upon taxpayer.	3. Shifts the burden of proo ment provided the taxpayer s statement of reasons for accum
	4. Only dividends paid during taxable year recognized in computing deduction for dividends paid.	4. Makes allowance for the fo and permits any dividends p months after the close of the ye credits against accumulated ea
	5. No specific earnings credit.	5. Provides a specific earnin first $30,000 of retained earning credit).
	6. Tax applies to entire amounts of earnings retained if any part of the earnings exceed the reasonable needs of the business.	6. Continues prior law.
Domestic personal holding companies (secs. 541–547, 565, and 6501 (f)).	1. Applies special tax of 75 to 85 percent on undistributed personal holding company income.	1. Continues prior law.
	2. A personal holding company is defined as a corporation which (a) receives 80 percent or more of its gross income from dividends, interest, or other investment income (70 percent in years following the year in which the 80-percent test is met) and (b) 50 percent of the stock of which is owned by 5 or less individuals (including their immediate families).	2. (a) Applies a constant 80- holding company income test, i ent 80–70-percent test. (b) Retains present stock with changes to treat a tax-exe or charitable trust as an indi mining whether 50 percent of t by 5 or less individuals.
	3. Allows railroad corporations filing consolidated returns to apply income test on a consolidated basis.	3. Extends right to apply inc solidated basis to any affiliated parent corporation received 80 of its income for the 3 precedi from other members of the gr member of the group meets th personal holding company wit income outside the group.
	4. Treats as personal holding company income any income from rental of property to corporate stockholders owning 25 percent or more of its stock.	4. Excludes rental income fr if the company does not receiv holding company income amou cent or more of its gross income
	5. Allows deduction of capital gains tax in determining income subject to personal holding company tax, although capital gains are excluded from the personal holding company tax base.	5. Disallows deduction of ca but continues deduction of capit
	6. Gross income for purposes of applying the 70 or 80 percent test is defined in general in the same manner as for the corporate income tax.	6. Continues prior law.
	7. Permits deficiency dividends with respect to prior years so as to eliminate personal holding company tax. This procedure not available in case of negligent failure by taxpayer to file personal holding company return.	7. Streamlines deficiency d dure. Allows deficiency divide except where fraud is involved
	8. Provides for consent dividends, which allocate retained earnings to shareholders for tax purposes with their consent.	8. Eliminates consent divide

ouse	Senate	Conference
ble needs of the business anticipated" business re-	2. House provision with technical changes.	2. House provision with Senate technical changes.
of proof to the Govern- xpayer submits a timely r accumulations.	3. House provision with technical changes.	3. House provision with Senate technical changes.
or the foreign tax credit dends paid within 2½ of the year to be taken as lated earnings.	4. House provision.	4. House provision.
c earnings credit of the earnings (not an annual	5. Increases the specific earnings eredit to $60,000.	5. Senate provision.
w.	6. Provides that the penalty tax is to be imposed on only that portion of the retained earnings deemed unreasonable.	6. Senate provision.
w.	1. House provision.	1. House provision.
stant 80-percent personal ne test, in lieu of the pres-	2. House provisions with technical amendments.	2. House provision with Senate technical modifications.
stock ownership tests tax-exempt organization an individual in deter- ent of the stock is owned .		
pply income test on con- ffiliated group if (a) the eived 80 percent or more preceding taxable years f the group and (b) no neets the definition of a any with respect to its ip.	3. Modified House provision by deleting requirement as to income of parent corporation and by applying second test only where income from outside of group is 10 percent or more of total income. Also, in applying 10-percent test, dividends received by parent from a corporation it controls are to be ignored.	3. House provision with Senate modifications.
come from stockholders t receive other personal ne amounting to 10 per- income.	4. House provision with an amendment providing that rental income from persons other than shareholders is to be ignored in applying 10 percent rule. Also, interest on reserve funds under Merchant Marine Act are not to be considered personal holding company income.	4. House provision with Senate amendments.
on of capital gains tax, of capital gains.	5. House provision with technical amendments.	5. House provision with technical changes made by Senate.
w.	6. Excludes from gross income in applying the 80-percent test, income from real property on which there is debt secured by stock or securities held by company.	6. House provision.
iency dividend proce- y dividends in any case nvolved.	7. House provision.	7. House provision.
dividend provisions.	8. Restores consent dividend provisions in simplified form.	8. Senate provision.

Item	1939 Code	House
	9. Treats income tax and personal holding company tax separately for purposes of filing returns, statute of limitations, and assessment.	9. Integrates income tax and ing company tax, so that a sin appropriate schedule will fulfi for both taxes. Provides 6-yea statute of limitations for person pany tax if corporation fails to sary personal holding company i
Foreign personal holding companies (secs. 551–557).	The undistributed income of such companies is included, as a dividend, in the income of the U. S. shareholders. A foreign personal holding company is a foreign corporation with generally the same tests as are provided for a domestic personal holding company except that the income tests are 50 and 60 percent in lieu of 70 and 80 percent.	No substantive change.
Allowance of deduction for depletion (sec. 611).	Depletion allowances allowed with respect to mines and mineral deposits, but, by interpretation, depletion allowances denied with respect to minerals produced from mine residue such as dumps and tailings.	Extends allowances for dep owners for extraction of ores o waste or residue accumulated fr Owners include successors in in free exchange.
Percentage depletion (sec. 613). Rates.	Provides for percentage depletion allowances at varying rates of gross income from the property but not to exceed 50 percent of net income from the property: (a) 27½ percent—oil and gas wells. (b) 23 percent—sulfur. (c) 15 percent—metal mines, aplite, bauxite, fluorspar, flake graphite, vermiculite, beryl, garnet, feldspar, mica, talc (including pyrophyllite), lepidolite, spodumene, barite, ball clay, sagger clay, china clay, phosphate rock, rock asphalt, trona, bentonite, gilsonite, thenardite, borax, fuller's earth, tripoli, refractory and fire clay, quartzite, diatomaceous earth, metallurgical grade limestone, chemical grade limestone, and potash. (d) 10 percent—coal, asbestos, brucite, dolomite, magnesite, perlite, wollastonite, calcium carbonates, and magnesium carbonates. (e) 5 percent—sand, gravel, slate, stone (including pumice and scoria), brick and tile clay, shale, oystershell, clamshell, granite, marble, sodium chloride, and, if from brine wells, calcium chloride, magnesium chloride, and bromine.	Provides the following rates: (a) 27½ percent—oil and gas (b) 23 percent—sulfur, (c) 15 percent—ball clay, chi clay, chemical grade limeston cal grade limestone, metal mine slate, vermiculite, (d) 10 percent—asbestos, br nite, perlite, wollastonite, (e) 5 percent— (A) brick and tile clay, marble, mollusk shells (includ and oyster shells), peat, pumi shale, sodium chloride, stone; (B) if from brine wells—b chloride, and magnesium chlo (f) 15 percent—all other m that the percentage shall be 5 such other mineral when used as riprap, ballast, road materi crete aggregates, dimension s tal stone, or for similar purpo "all other minerals" does not inc (A) soil, sod, dirt, turf, or (B) minerals from sea wa from sources which, by com economic standards, are reg haustible.

use	Senate	Conference
tax and personal hold- at a single return with ill fulfill requirements es 6-year period under r personal holding com- fails to provide neces- mpany information.	9. House provision.	9. House provision.
e.	Foreign banking corporations are exempted from tax if Comptroller of Currency certifies that (except for a prohibition against receiving deposits as required by the foreign country's laws) they meet the tests of national banks in the District of Columbia.	Modifies Senate provision to exempt foreign banks only if they are not formed or availed of to avoid tax.
for depletion to mine f ores or minerals from lated from their mines. ors in interest in a tax-	House provision. Also provides rules for apportioning depletion deduction between an estate and the beneficiaries.	House provision with Senate modification.
g rates: and gas wells, ır, clay, china clay, sagger limestone, metallurgi- al mines, rock asphalt, stos, brucite, coal, lig- e, e clay, granite, gravel, (including clam shells at, pumice, sand, scoria, e, stone; and vells—bromine, calcium um chloride, other minerals, except ll be 5 percent for any n used or sold for use material, rubble, con- nsion stone, ornamen- r purposes. The term s not include— turf, or mosses; or sea water, the air, or by commonly accepted are regarded as inex-	Provides the following rates: (a) 27½ percent—oil and gas wells. (b) 23 percent— (1) sulfur and uranium; and (2) if from deposits in the United States—anorthosite (to the extent alumina and aluminum compounds are extracted therefrom), asbestos, bauxite, beryl, celestite, chromite, corundum, fluorspar, graphite, ilmenite, kyanite, mica, olivine, quartz crystals (radio grade), rutile, block steatite talc, and zircon, and ores of the following metals: antimony, bismuth, cadmium, cobalt, columbium, lead, lithium, manganese, mercury, nickel, platinum and platinum group metals, tantalum, thorium, tin, titanium, tungsten, vanadium, and zinc. (c) 15 percent—ball clay, bentonite, china clay, sagger clay, metal mines (if subsection (b) (2) does not apply), rock asphalt, and vermiculite. (d) 10 percent—asbestos (if paragraph (b) (2) does not apply), brucite, coal, lignite, perlite, sodium chloride, and wollastonite. (e) 5 percent— (1) brick and tile clay, gravel, mollusk shells (including clamshells and oystershells), peat, pumice, sand, scoria, shale, and stone, except stone used as dimension stone or ornamental stone; and (2) if from brine wells—bromine, calcium chloride, and magnesium chloride. (f) 15 per cent—all other minerals (including, but not limited to, aplite, barite, borax, calcium carbonates, refractory and fire clay, diatomaceous earth, dolomite, feldspar, fullers	House provision as modified by Senate.

Item	1939 Code	House
Ordinary treatment processes.	Percentage rate of depletion is applied to gross income from the property, defined to mean the gross income not merely from the extraction of the minerals from the ground but also from certain ordinary treatment processes and specified transportation.	Adds new definitions of ordi processes in the case of talc and
Definition of property (sec. 614).	Contemplates that the depletion allowance shall be computed by properties but provides no definition of a property.	Provides a general rule that t erty" means each separate inte the taxpayer in each mineral separate tract or parcel of land would permit a taxpayer who operating mineral interests with unit to aggregate two or more o into one property for purposes depletion.
Exploration expenditures (sec. 615).	Taxpayer may deduct in the current taxable year expenditures for mine exploration not in excess of $75,000, or may elect to defer any part of these expenditures to be deducted ratably when mineral is sold. This privilege is available only in any 4 years.	Continues prior law.
Gain or loss in the case of timber (secs. 272 and 631).	Taxpayer who owns or has contract rights to cut timber may elect to treat the cutting of timber as a sale or exchange. Similarly the taxpayer who owns timber may treat his receipts from its disposition as capital gain.	Retains prior law and specifi expenses are to be regarded as taxpayer's basis, thus reducing capital gain, and other expense ductible from ordinary income.

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	earth, garnet, gilsonite, granite, limestone, magnesite, magnesium carbonates, marble, phosphate rock, potash, quartzite, slate, soapstone, stone used as dimension stone or ornamental stone, thenardite, tripoli, trona, and (if subsection (b) (2) does not apply) bauxite, beryl, flake graphite, fluorspar, lepidolite, mica, spodumene, and talc, including pyrophyllite), except that, unless sold on bid in competition with a mineral listed in (c), the percentage shall be 5 percent for any such other mineral when used, or sold for use, by the mine owner or operator as riprap, ballast, road material, rubble, concrete aggregates, or for similar purposes. For purposes of this paragraph, the term "all other minerals" does not include— (1) soil, sod, dirt, turf, water, or mosses; or (2) minerals from sea water, the air, or similar inexhaustible sources.	
of ordinary treatment alc and magnesite.	House provision, but adds new definitions of ordinary treatment processes for coal and phosphate rock.	House provision with Senate modification.
le that the term "prop- ate interest owned by ineral deposit in each of land. Special rule ver who owns various sts within an operating more of such interests urposes of percentage	In addition, provides that any aggregation of separate interests into one property for purposes of percentage depletion will also be effective for cost depletion and for the determination of basis. The Secretary is authorized upon a showing of undue hardship to permit a taxpayer owning two or more nonoperating interests in a single tract or in contiguous tracts of land to aggregate them as one property.	House provision with Senate modification.
	Raises the $75,000 annual limitation to $100,000.	Senate provision.
d specifies that certain ded as additions to the educing the amount of expenses are to be de- income.	Deletes House provision as to treatment of expenses. Provides that the disposal date of timber is the date of cutting or payment, whichever is earlier; that a sublessor may be treated as an owner; and that capital gains treatment is extended to gains from the sale of evergreen trees more than 6 years old when severed from the roots and sold for ornamental purposes.	Senate provision.

Item	1939 Code	House
Gain or loss in the case of coal (secs. 272 and 631).	Taxpayer who receives coal royalties treats receipts as capital gain.	Retains prior law and specifies expenses are to be regarded as ad taxpayer's basis, thus reducing t capital gain, and other expenses ductible from ordinary incom treatment to include sublessor.
Gain or loss from iron ore royalties (sec. 631).	Taxed as ordinary income.	Continues prior law.
Estates, trusts, beneficiaries and decedents. General rules for taxation of estates and trusts (secs. 641–643).	1. Trusts and estates are treated as separate taxpaying entities and the normal and surtaxes levied by chapter I upon individuals are imposed on the net income of estates and on the net income of any kind of property held in trust. 2. A trust is allowed a deduction for personal exemption in the amount of $100; an estate is allowed a deduction of $600. Other credits and deductions allowed to individuals are, in general, allowed to estates and trusts or their beneficiaries. 3. A trust or estate is allowed an unlimited deduction for charitable contributions where such amounts are paid or permanently set aside for charitable purposes or are to be used exclusively for charitable purposes. 4. Unused loss carryovers are lost when estate or trust terminates. 5. Embodies the basic concept that estates and trusts, although separate entities, are only conduits through which income flows to the beneficiary, except where income is accumulated for future distribution. Also embodies a tracing requirement under which taxable distributions must be traced to trust income of the current year.	1. Continues prior law, except t income" is substituted for "Net in 2. Continues prior law, except duction for personal exemption is instead of $100 in the case of a t required to distribute all of its inc New dividends-received credit (s apportioned between the fiduciary ficiaries in proportion to the div allocable to each. 3. Continues prior law. 4. Provides that upon termi estate or trust any unused net carryover, capital loss carryover, in excess of gross income will be to the remaindermen succeeding t 5. Defines the term "distributab as the taxable income of the estat certain modifications. Concept o net income gives statutory exp conduit theory.
Trusts which distribute current income only (secs. 651, 652).	Ordinary distributable trusts are allowed a deduction for the amount of income for the taxable year which is to be distributed currently by the fiduciary to the beneficiary. The amount allowed as a deduction must be included in the net income of the beneficiary whether distributed or not.	Generally follows prior law, b a separate subpart to deal with tributable trusts. Deductions to not exceed the distributable net trust for the taxable year. If d beneficiaries exceed the distribu come of the trust, each beneficiary on his proportionate share.

e	Senate	Conference
specifies that certain ed as additions to the ducing the amount of xpenses are to be de- income. Extended essor.	House provision with technical changes.	House provision with Senate technical changes.
	Extends capital gain treatment to recipients of iron ore royalties derived from production in the United States.	Rejects Senate provision and thus continues prior law.
except that "Taxable "Net income."	1. House provision.	1. House provision.
, except that the de- ption is raised to $300 se of a trust which is f its income currently. redit (sec. 34) is to be iduciary and the bene- the dividend income	2. House provision with deletion of allocation of dividends-received credit.	2. House provision.
	3. Continues prior law.	3. Continues prior law.
n termination of the ed net operating loss rryover, or deductions will be made available eeding to the property. tributable net income" he estate or trust with oncept of distributable ory expression to the	4. Amends House provision to limit the amount of deductions in excess of gross income which are made available to remaindermen to the deductions with certain exceptions allowable in the final taxable year of the estate or trust. 5. House provision except for certain technical changes in the treatment of capital gains and losses in definition of distributable net income.	4. House provision as modified by Senate. House provision with Senate modifications.
r law, but establishes al with currently dis- tions to the trust can- ble net income of the r. If distributions to distributable net in- neficiary is taxed only e.	House provision.	House provision.

Item	1939 Code	House
Estates and trusts which may accumulate income or which may distribute corpus (secs. 661–663).	1. Estates in process of administration and discretionary trusts are allowed a deduction in computing net income for the amount of the income of the estate or trust that is properly paid or credited during the taxable year to the beneficiary. The amount allowed as a deduction must be included in computing the income of the beneficiary. Provides for artificial allocations of income under the 65-day and 12-month rules. The 65-day rule provides, in general, that where the income of a trust for a period beginning prior to the beginning of the taxable year becomes payable within the first 65 days of the taxable year, then the distribution is deemed to have been made on the last day of the preceding taxable year. If the trust income for any period is distributable after the end of the taxable year in which received, then the fiduciary is allowed a deduction for as much of such income as was earned within the 12 months prior to the date of distributions, and the beneficiary is taxable on the income in the year of distribution. 2. Excludes from taxation the value of property acquired by gift, bequest, devise, or inheritance. If the gift or bequest is to be paid at intervals, then to the extent that it is paid or credited out of income of property it is not excluded.	1. Adopts the general principl extent of the trust's current incom ble net income) all distributions by the estate or trust and taxabl ficiaries. This approach represe parture from the general rule of taxable distributions must be tra come of the estate or trust for th and permits the elimination, with tions, of the complex 65-day rules. Estates and trusts are all tion, and beneficiaries must inclu come, amounts distributed or requ tributed for the taxable year up of the distributable net income. provides that the income in the beneficiaries retains the same char in the hands of the trust. 2. Continues prior law, but any amount paid or credited as a tion, except to the extent that it co income of the estate or trust for th
Treatment of excess distributions by trusts (secs. 665–668).	The 65-day and 12-month rules were designed to prevent certain tax avoidance devices, but these provisions do not fully prevent the shifting of the tax burden in part from a beneficiary to the trust even where the trust income is paid to the beneficiary in effect on an annual basis.	Provides that distributions by cess of its distributable net incom rent taxable year will be "thrown of the five preceding years and beneficiaries to the extent that th net income of those years was no tributed. To prevent double t ficiaries receive a credit for any ta paid by the trust which are attri excess amounts thrown-back. Be cept for the fact that they repo rently, are placed in the same po trust made the distribution at t ceived the income.

	Senate	Conference
principle that to the nt income (distributa- butions are deductible d taxable to the bene- represents a basic de- rule of prior law that t be traced to the in- t for the current year on, with certain excep- 5-day and 12-month are allowed a deduc- st include in their in- l or required to be dis- year up to the extent income. Specifically in the hands of the me character as it had	1. House provision, except for technical changes in the treatment of gifts, bequests, etc.; charitable distributions; distributions in first 65 days of taxable year; and separate shares.	1. House provision with Senate modifications.
w, but also excludes ted as a final distribu- hat it consists of gross st for the taxable year.	2. Revises and amends House provision by providing that the gift or bequest of a specific sum of money or specific property which, under the terms of the governing instrument, is paid or credited to a beneficiary either in a lump sum or in not more than three installments will be excluded. Adds new provision (sec. 663 (b)) to permit the fiduciary of certain existing trusts to elect to treat distributions within the first 65 days of the taxable year of the trust as amounts which were paid or credited on the last day of the preceding taxable year. Adds new subsection (663 (c)) which adopts a "separate share rule". In the case of a trust having more than one beneficiary, if the share of one or more of the beneficiaries is to be treated under the trust instrument as a substantially separate and independent share (and is so administered by the fiduciary), then for purposes of determining the amount of distributable net income available for allocation to the beneficiaries, such separate share is deemed a separate trust.	2. House provision with Senate modifications.
ions by a trust in ex- et income for the cur- "thrown-back" to each ars and taxed to the that the distributable was not, in fact, dis- ouble taxation, bene- r any taxes previously re attributable to the ck. Beneficiaries, ex- ey report income cur- ame position as if the ion at the time it re-	Accepts the five-year throwback provisions as contained in the House bill. Amends the exclusion for distributions made for "maintenance, support or education of the beneficiary" so that the exception will apply only to amounts distributed to meet the "emergency needs" of a beneficiary. Adds two new exceptions: (a) excepts from the application of the throwback rule certain distributions required to be made under the terms of a trust in existence prior to January 1, 1954, under which accumulated income is required to be distributed at specified ages of at least four-year intervals.	House provision as modified by Senate, with technical changes, and, in item (b), changing ten years to nine years.

Item	1939 Code	House
		Excludes from the application o back rule distributions exceeding net income by less than $2,000, representing accumulations during of the beneficiary, and distribut maintenance, support or educatio ficiary.
Grantors and others treated as substantial owners (secs. 671–678).	Specific statutory provisions tax the grantor on the income of a revocable trust (sec. 166, I. R. C.) and the income of a trust in which the income may be paid to the grantor, accumulated for his benefit or applied to the payment of insurance premiums on his life. (Sec. 167, I. R. C.) In addition, regulations (commonly known as the Clifford regulations) provide for taxing to the grantor under the general definition of income (sec. 22 (a)) the income of trusts in which the property will revert to the grantor at the end of a term of years, or trusts in which the grantor reserves certain powers to determine beneficial enjoyment or retains certain important administrative powers.	Gives statutory expression to t erning the taxation of income fro ing within the purview of the Cl tions, as well as those trusts co tions 166 and 167 of the 1939 Co contains all the provisions for t grantor the income of a trust grounds of his dominion or con trust. In general, accepts the po embodied in prior law (including regulations) as the basis for the ta area. With respect to short-term trusts, a grantor is taxable on the reversionary interest may take eff years; except that if the income payable for certain specified ch purposes, the prohibited reversio 2 years.
Income in respect of a decedent (sec. 691).	Income accrued solely by reason of the death of a decedent is taxable to the recipient at the time the income is received. The recipient of the income receives a deduction for the estate tax attributable to the inclusion of the income item in the gross estate of the decedent, but does not acquire a new basis for this property as of the date of death of the decedent. Gain on uncollected installment obligations is treated as realized on the death of the decedent.	Continues prior law with ce ments. First, the principle is app sive decedents by providing tha income received from a decedent, cedent, is includible in the income ent with an offsetting deduction tax attributable to such property. bill makes installment obligations come in respect of a decedent. Th ment provided for income in resp dent is extended to several forms presently covered, including the v ercised restricted stock options.
Partners and partnerships (secs. 701–771).	1. Inadequate statutory treatment. Regulations, rulings and court decisions are incomplete and frequently contradictory. Partners unable to form, operate or dissolve a business with any assurance as to tax consequences. Considerable confusion as to whether a partnership is an entity apart from the partners, or merely an aggregate of individual interests.	1. A partnership is to be regar duit through which income and transferred directly to partners. fecting taxable income, except fo credit, are to be made at the part 2. Basis of partner's interest is mined in accordance with prior adding his initial contribution to partnership income and subtract tions by the partnership.

e	Senate	Conference
ication of this throw- ceeding distributable $2,000, distributions s during the minority listributions for the ducation of the bene-	(b) excludes amounts distributed to a beneficiary as a final distribution of the trust where such distribution does not occur within the ten years following the last transfer of property to the trust.	
ion to the rules gov- ome from trusts fall- f the Clifford regula- usts covered by sec- 1939 Code. Subpart ns for taxing to the trust solely on the or control over the s the policy decisions ncluding the Clifford or the tax rules in this	House provisions except for certain technical amendments.	House provision with Senate modifications.
rt-term reversionary on the income, if the take effect within 10 ncome is irrevocably ified charitable, etc., eversionary period is		
with certain amend- e is applied to succes- ing that a right to cedent, or a prior de- income of the recipi- uction for any estate roperty. Second, the igations items of in- nt. Third, the treat- in respect of a dece- forms of income not ng the value of unex- ions.	House provisions but adds a new subsection which treats portions of certain amounts received by a surviving annuitant of a joint and survivor annuity, for purposes of the deduction for estate tax, as though they were amounts of gross income in respect of a decedent.	House provision with Senate addition.
e regarded as a con- ne and loss items are rtners. Elections af- xcept for foreign tax he partnership level.	1. Substantially the same as House provision.	1. House provision with minor changes made by Senate.
terest is to be deter- h prior practice by ution to his share of subtracting distribu-	2. In addition to House provision, an alternative and simplified method of determining basis of an interest is provided. A partner may compute his basis by reference to his share of the total partnership basis.	2. House provision with Senate addition.

Item	1939 Code	House
		3. Partnerships are not to adop to a fiscal year except for valid b sons. Partnership year is not to son of termination of an interest o of new partner.
		4. Transactions between partner nership to be treated as though ship were an entity dealing with Special rules provided for sales to the partnership where the part has a 50 percent or more interest in
		5. Contributions by a partner to ship are not to involve gain or los the contributed asset is carried ove quent depreciation or gain or loss the partners in their regular pro ratio.
		6. Property distributed by a pa to have, in general, the same basi tributee as it had in the hands of ship. Money and property distrib duce the partner's capital interest tributions in excess of the basis of are to be taxed as capital gain. C recognized where the basis of the ceeds the partnership basis for p tributed in a complete liquidatio terest.
		7. The sale of an interest in a generally is to result in capital gain to the extent that a partner recei for his share of (a) unrealized re (b) substantially appreciated or inventory, ordinary income is to
		8. Upon disposition of the intere ner, the partnership may elect t basis of partnership assets to refle ence between the market value and interest disposed of. The adjuste assets is to apply to all the partne an election once made is irrevocabl
		9. Payments made to a retiring to his estate) are to be separated i representing the purchase of his (b) those in excess thereof. As ments classified under (b) above, partner is to be considered for 5 ceiving a share of partnership in payments after 5 years are to b gifts and are not excludible from income of the surviving partners.

to adopt or change
valid business rea-
not to end by rea-
nterest or admission

partners and part-
though the partner-
ng with an outsider.
r sales of property
the partner involved
terest in the firm.
rtner to the partner-
in or loss. Basis of
rried over and subse-
or loss is shared by
ular profit and loss

by a partnership is
me basis to the dis-
ands of the partner-
y distributed will re-
interest and any dis-
basis of that interest
gain. Capital loss is
s of the interest ex-
is for property dis-
quidation of an in-

est in a partnership
ital gain. However,
er receives payment
alized receivables or
ated or depreciated
ne is to be realized.
he interest of a part-
elect to adjust the
to reflect the differ-
alue and basis of the
adjusted basis of the
e partners, and such
revocable.
retiring partner (or
arated into (a) those
of his interest and
of. As to the pay-
) above, the retiring
d for 5 years as re-
rship income. Such
are to be considered
ole from the taxable
artners.

Senate	Conference
3. Permits partners or partnerships to change to or adopt any year they choose so long as both the principal partners (those owning an interest of 5 percent or more) and the partnership change to or adopt the same year. Exceptions are to be permitted for valid business reasons.	3. Senate provision with technical modifications.
4. Sales of property to partnership will be subject to same rules as in case of sale of property to a corporation by the stockholders. 80-percent rule applied to gains, 50-percent rule to losses.	4. Senate provision.
5. Provides an alternate rule in the case of contributed property which will permit basis of such property, subsequent depreciation, and gain or loss to be allocated among the partners in any manner to which they agree.	5. House provision with Senate alternative.
6. Distinguishes between (a) distributions in liquidation of an interest and (b) nonliquidating distributions. In the case of liquidating distributions, provides that the distributee will substitute for the basis of the property in the hands of the partnership, the basis he had for his partnership interest. Bases for receivables and inventory, however, are to be carried over. Retains House rules for nonliquidating distributions, except that the basis carried over for distributed property is not to exceed the partner's basis for his interest in the firm. Partnership may make an adjustment to basis of remaining assets where partner may not retain all of partnership basis for property.	6. Senate provision with technical modifications.
7. Removes payments for substantially depreciated inventory from category requiring ordinary income treatment. Revises definition of "substantial appreciation." Simplifies rules applicable to purchaser of interest.	7. House provision as modified by Senate with technical changes.
8. Limits the adjustment to basis of assets resulting from a disposition of an interest to the transferee partner alone. Permits the election with respect to this adjustment to be revoked upon a showing of cause by taxpayer.	8. House provision as modified by Senate with technical changes.
9. Removes the 5-year restriction with respect to payments to a retiring partner (or to his estate) in excess of his capital interest. Provides that amounts paid for receivables and goodwill (unless the partnership agreement provides otherwise) are to be treated as a distributive share of partnership income by the retired partner.	9. House provision as modified by Senate.

Item	1939 Code	House
		10. Changes generally are made e taxable years beginning after De 1953.
Life insurance companies (secs. 801–807).	Life-insurance companies taxed under temporary provisions through 1953, applying 6½-percent tax on net investment income (3¾ percent on first $200,000). This reverts automatically to 1942 formula in 1954 and later years.	Provides continuance of tempor surance company tax provisions for
Regulated investment companies (secs. 851–855).	1. Regulated investment companies meeting specified requirements as to asset diversification, capital structure, source of income, and operations, and which distribute at least 90 percent of their ordinary income are treated as "conduits" and taxed only on their undistributed income. At least 90 percent of their gross income must be derived from dividends, interest, or gain from sale of stock or securities. The diversification tests require that at least 50 percent of the company's portfolio consist of holdings, no one of which exceeds 10 percent of the voting securities of the issuer or 5 percent of the value of the assets of the regulated investment company. The tests also require that not more than 25 percent of the value of its total assets be invested in any one company or group of associated companies. Capital gains distributed by the company may be identified as capital-gain dividends, subject to capital gain treatment in hands of shareholders.	1. Continues prior law.
	2. In the case of certain venture capital companies principally engaged in furnishing capital to development corporations, exploiting new inventions, products, or processes, the asset diversification requirements are relaxed so that the company may hold more than 10 percent of the outstanding voting securities of a single issuer for as long as 10 years.	2. Continues prior law.
	3. Shareholders denied benefits of foreign tax credit available to investment company.	3. Allows the pass-through to s of the foreign tax credit where m percent of the company's investm foreign securities.
	4. Shareholders may claim dividends-received credit even though dividends paid by investment company are paid out of interest income and dividends from foreign corporations.	4. Where interest represents m percent of a regulated investment income the intercorporate and indi dends deduction or credit is to be av with respect to the portion of it which represent interest received pany.
Nonresident alien individuals and foreign corporations (secs. 871–884).	1. Nonresident alien individuals and foreign corporations, not engaged in trade or business in the United States, are taxed on annual or periodical income from domestic sources. Such individuals are also taxable on capital gains, if they are present in the United States during the taxable year.	1. Enlarges the tax base to inclu considered to be gains from the change of capital assets, as if they or periodical income.

	Senate	Conference
e made effective for fter December 31,	10. Makes new provisions applicable for years beginning after December 31, 1954, except for the provision relating to the adoption of taxable years effective April 1, 1954, and certain other loophole-closing provisions effective March 9, 1954.	10. Senate provision with two modifications: (a) Provisions dealing with nonliquidating distributions are made effective on an optional basis for taxable years beginning after December 31, 1953, and before January 1, 1955; and (b) the rules relating to the continuation of a partnership are made applicable after April 1, 1954, in applying the taxable year provision.
temporary life-in- ions for 1954.	House provision with minor technical amendments.	House provision, without Senate technical amendments.
	1. Continues prior law.	1. Continues prior law.
	2. Further liberalizes the diversification requirements for venture capital companies so that the existing test to the effect that not more than 5 percent of the value of an investment company's assets may be invested in a single development company need be met only on the basis of cost at the time of the investment.	2. Senate provision.
ugh to shareholders where more than 50 investments are in	3. House provision.	3. House provision.
sents more than 25 vestment company's and individual divi- to be available only on of its dividends eceived by the com-	4. House provision, but restricts availability of dividends-received credit or exclusion to shareholders by denying credit or exclusion with respect to dividends derived from foreign corporations.	4. House provision.
to include amounts om the sale or ex- if they were annual	1. Restricts expansion of the tax base provided for in the House bill to gains covered by sections 402 (a) (2), section 631 (b) and (c), and section 1235 which are considered to be gains from the sale or exchange of capital assets. These sections refer to certain lump-sum distributions from a qualified pension trust, certain gains from the disposal of timber, coal and iron, and certain gains from the transfer of an interest in a patent.	House provision as modified by Senate with further technical changes.

Item	1939 Code	House
	2. A nonresident alien employee of a foreign firm may work in the United States for his employer without being subject to tax on his earnings while in the United States if he is here no more than 90 days and earns no more than $3,000 in that period. If the foreign employer is a branch of an American corporation the exemption does not apply.	2. Applies the exemption accorde 90-day, $3,000 rule to nonresident ployed by a foreign branch of a d poration.
Foreign tax credit (sec. 901).	A credit against income tax is allowed for income and profits taxes paid or accrued to a foreign country or a United States possession, including taxes imposed in lieu of an income or profits tax.	Allows credit for a "principal t accrued to the national government country or a United States posse alternative to the credit for incom posed by such national government. the credit allowed under prior la imposed in lieu of an income tax.
Royalty payments treated as dividends in certain cases (sec. 902 (d)).	No provision.	Provides that, under certain ci where a foreign subsidiary, wholly domestic corporation, makes a pay parent of property in return for property furnished by the parent of dividends, then a portion of su is to be treated as a distribution.
Limitation on foreign tax credit (sec. 904).	The credit for foreign income taxes is subject to two limitations: (1) Under the per country limitation, the amount allowed as a credit for taxes paid to any one country may not exceed that proportion of the taxpayer's United States tax liability which his income from that country bears to his total income. (2) Under the over-all limitation the credit allowed for the aggregate foreign income taxes paid may not exceed that proportion of the taxpayer's United States tax liability which his income from all sources outside the United States bears to his total income.	Removes the over-all limitation additional limitation, however, to t of the 14-percent tax rate reducti corporations on certain business i foreign countries.
Exclusion of earned income from sources outside the United States (sec. 911).	An individual who is engaged in business abroad in an enterprise in which capital and personal services are material income-producing factors may claim a maximum of 20 percent of his share of the earnings of the business as earned income, which may be eligible for exemption from tax.	Increases the maximum percent tion from 20 to 30 percent.
Western Hemisphere trade corporations (sec. 921).	To qualify as a Western Hemisphere trade corporation and thus receive a 14-percent tax-rate reduction, a domestic corporation must, among other requirements, do all its business in the Western Hemisphere. It has been feared that this disqualifies a firm making incidental purchases outside the Western Hemisphere.	Adds a provision to indicate tha purchases outside the Western He not disqualify a corporation othe fied for Western Hemisphere tax t

	Senate	Conference
accorded under the resident aliens em- of a domestic cor-	2. House provision.	2. House provision.
ncipal tax" paid or rnment of a foreign s possession as an r income taxes im- rnment. Eliminates prior law for taxes me tax.	Strikes out provisions of the House bill and retains prior law.	Senate action.
rtain circumstances wholly owned by a s a payment to the irn for services or parent and in lieu n of such property ution.	House provision, but specifies that the amount of the distribution shall be determined by reference to the fair market value of the property transferred from the foreign subsidiary to the domestic parent.	House provision with Senate modifications.
nitation. Adds an ver, to take account reduction allowed siness income from	House provision, but strikes out the additional limitation to conform with its action in striking the 14-percent rate reduction from the bill.	House provision with Senate modification.
percentage limita-	House provision.	House provision.
cate that incidental tern Hemisphere do on otherwise quali- re tax treatment.	House provision, but makes clear that the change is not intended to prejudice the interpretation of existing law.	House provision with Senate clarification.

Item	1939 Code	House
14 percent tax reduction on business income from foreign sources (sec. 923, House bill).	Business income derived from foreign sources is generally subject to tax in the same way as income from domestic sources except in some instances, such as Western Hemisphere trade corporations which receive a credit equivalent to a rate reduction of 14 percentage points.	Allows a 14-percent rate red domestic corporation deriving forei the form of (1) fees for scientific, t engineering services abroad, (2) di interest received from a foreign engaged in the active conduct of a t ness abroad, with which it has close stock ownership or otherwise, and derived through a foreign branch the active conduct of a trade or bus and electing to postpone the reali come until brought home.
Special deduction of China Trade Act corporations (sec. 941).	1. China Trade Act corporations are allowed a credit against net income equivalent to that proportion of net income derived from sources within China which the par value of stock owned by (a) persons resident in China, the United States, or possessions of the United States, and (b) individuals who are citizens of the United States or China, wherever resident, bears to the par value of all the stock of the corporation. Such credit is conditioned upon the declaration of a special dividend equivalent to the tax savings resulting from the credit against net income. 2. Residents of China may exclude from gross income dividends received from China Trade Act corporations.	1. Changes the credit against net special deduction determined as u law, except that in computing the a deduction the shares of stock owne resident in Formosa is substituted resident in China and the stock c citizens of China wherever reside nated as a factor in the formula. 2. "Resident of Formosa" repla of China."
Deferral of tax on income from foreign branch corporations (secs. 951–958, House bill).	No provision.	Grants domestic corporations t defer tax on the profits of a branc abroad until such time as the profi ted to the United States. This is s treatment accorded to profits de through a foreign subsidiary cor profits of which are not taxed to parent until they are declared as d the option to defer tax on the inco eign branch is exercised, a separa counts would be maintained for th transactions between it and the h between it and another elected bra treated for tax purposes as if they actions between two separate e business conducted by the branch w meet the same tests concerning th duct of a trade or business as thos for purposes of the 14-percent ra on foreign income.
Basis of property acquired from a decedent (sec. 1014).	Property transferred at death generally receives a "stepped-up" basis; but this new basis is not available with respect to property included in the estate on account of constituting (a) a transfer in contemplation of death, (b) an acquisition by a surviving joint tenant or	Provides a new basis at death for includible in the decedent's estate f purposes except (a) income in decedent, including unexercised re option and (b) the interest element the survivor's interest in a joint

	Senate	Conference
ate reduction to a ng foreign income in entific, technical and l, (2) dividends and foreign corporation, act of a trade or busi- nas close ties through ise, and (3) income branch engaged in le or business abroad he realization of in-	Eliminates the provisions of the House bill.	Senate action.
ainst net income to a ed as under existing ng the amount of the ck owned by persons stituted for persons stock ownership of er resident is elimi- nula.	1. Retains House provision except that residents of Hong Kong are added to those of Formosa for purposes of determining the amount of the special deduction. In addition, the amount of the deduction is based upon taxable income derived from sources within Formosa and Hong Kong instead of within China as under prior law and the House provision.	1. House provision with Senate modifications.
a" replaces "resident	2. Retains House provision but adds "resident of Hong Kong."	2. House provision with Senate modification.
ations the option to a branch conducted he profits are remit- This is similar to the ofits derived abroad ary corporation, the axed to the domestic red as dividends. If the income of a for- a separate set of ac- d for the branch and d the home office or ted branch would be s if they were trans- arate entities. The branch would have to ning the active con- as those established rcent rate reduction	Eliminates House provision.	Senate action.
eath for all property estate for estate tax me in respect of a cised restricted stock element contained in a joint and survivor	Accepts House provision and provides in the case of *inter vivos* transfers, that the transferee takes the date-of-death (or alternative date) value for property, reduced for depreciation, depletion, and amortization deducted between the date of gift and the date of death. Specifi-	House provision with Senate modifications.

Item	1939 Code	House
	tenant by the entirety, or (c) a reserved income transfer.	annuity. However, if either exce ported for income tax, a credit is estate tax paid (as a substitute fo at death).
Depreciation sustained while property is used by a tax-free organization (sec. 1016).	Where a tax-exempt organization which has held property for a number of years, becomes taxable (e. g., by application of the unrelated business income tax in 1950), it is unclear what basis the property should have for purposes of computing depreciation in taxable years.	Provides that the basis of such original cost reduced for depreciati tent sustained, during any period when the property was held by the not subject to income tax.
Sale of an annuity contract (sec. 1021).	Provides no special rules regarding gain or loss on the sale of an annuity contract.	Under the new rule for taxing an possible that an annuitant might tract after having recovered tax-fre the original cost of the property possibility of a "negative basis," provides that basis cannot be red zero.
Exchange of stock for property (sec. 1032).	Corporation may have gain or loss recognized when dealing in own stock as it would in the stock of another.	Provides that no gain or loss wi nized when stock (whether or n stock) is exchanged for money property.
Involuntary conversions (sec. 1033).	1. Gain from the involuntary conversion of certain property may be postponed where the proceeds are reinvested in similar property within one year, which period may be individually extended by the Commissioner (Sec. 112 (f)). Not applicable to personal residences.	1. Extends application of the sect the involuntary conversions of pe dences, so that homeowners may longer replacement periods.
Sale or exchange of a residence (sec. 1034).	1. The immediate recognition of a capital gain on the sale of a taxpayer's principal residence (including an involuntary conversion) is postponed, provided the proceeds are used to acquire a new residence. Gain is recognized only to the extent that the selling price of the old residence exceeds the cost of the new. 2. The selling price may not be reduced by selling expenses. 3. Members of the Armed Forces are allowed a period of 4 years, but not later than January 1, 1954, in which they may purchase a new residence after the old one has been sold.	1. The section is no longer appli involuntary conversion of personal in such cases the regular involunt sion provisions will be applicable, give an opportunity to such hom obtain a longer replacement period. 2. Provides that, for purposes of gain, the sale price may be reduced expenses and "fixing up" expens within a 90-day period prior to the sale. 3. Eliminates the cutoff date on ment period for the Armed Forces.

	Senate	Conference
her exception is re-redit is allowed for titute for new basis	cally includes property subject to a power of appointment exercisable by a decedent at the time of his death.	
of such property is preciation to the ex- period since 1913, by the organization	House provision.	House provision.
axing annuities, it is might sell his con- l tax-free more than roperty. To avoid basis," this section be reduced below	House provision.	House provision.
loss will be recog- er or not treasury money or other	House provision.	House provision.
the section to cover s of personal resi- ers may apply for	1. House provision.	1. House provision.
	2. Adds new provision that where a person has land holdings in excess of the maximum allowable under reclamation projects, the sale of such excess land is to be treated as an involuntary conversion.	2. Senate provision.
	3. Adds new provision that where livestock are destroyed by disease, or sold or exchanged because of disease, such destruction or sale is to be treated as involuntary conversions.	3. Senate provision with amendment to include livestock destroyed because of disease.
er applicable to the personal residences; involuntary conver- olicable, which will ich homeowners to period.	1. House provision.	1. House provision.
poses of recognizing reduced by selling expenses incurred r to the contract of	2. House provision.	2. House provision.
late on the replace- Forces.	3. House provision.	3. House provision.

Item	1939 Code	House
Mortgage foreclosures (sec. 1035, House bill).	A foreclosure is treated as a sale. The creditor is entitled to a bad-debt deduction in the amount of the difference between the bid price and the amount of the debt, provided such difference is otherwise uncollectible from the debtor. Simultaneously, he realizes a loss or gain measured by the difference between the bid price and the fair market price of the property foreclosed. The tax treatment of similar transactions (e. g., voluntary conveyances, repossessions on conditional sales, etc.) varies considerably, but in general a loss is recognized at the time of foreclosure based on the fair market value of the property.	Provides that all foreclosures l property held as security for a d as tax-free exchanges, with the c over the property with the basis o ness. Gain or loss to the creditor for tax purposes until the forec is eventually disposed of.
Exchanges of insurance policies (sec. 1035).	Where one insurance policy is exchanged for another, the excess of the value of the policy received over the premiums paid for the exchanged policy is taxable.	Allows tax-free exchange of: A another life policy or endowment endowment policy for another annuity; and an annuity for an contract received by the taxpaye basis of the contract exchanged ment for other payments acco transfer.
Stock for stock of same corporation (sec. 1036).	Under section 112 (b) (2), an exchange of common stock for common, or preferred for preferred, in the same corporation is not considered a taxable exchange.	In connection with the new ganization provisions, omits se (2).
Definition of capital asset (sec. 1221).	1. An accrual basis taxpayer is required to take into income the value of an account or note receivable acquired on the sale of services, inventory or stock in trade, or in connection with the rendering of services. Since such accounts or notes constitute capital assets unless the taxpayer is dealing in them, he receives a capital loss if he sells them for less than he previously took into income. 2. Certain Government bonds with a life of less than 1 year and not bearing interest are excluded from capital asset category.	1. Eliminates such accounts f tion of a capital asset, thereby nary loss or income treatment account or note is sold or excha equivalent to the treatment ap account or note is held until ma 2. Removes this specific excep ital asset category with respect issued after December 31, 1954.
Holding period of the property (sec. 1223).	1. In determining long or short-term capital gains or losses, the holding period of an asset given up in a tax-free exchange is added to the holding period of the asset acquired. 2. If a taxpayer holding a commodity futures contract accepts delivery of the commodities, his holding period of the commodity starts as of the date of delivery, although if he had held the contract itself for more than six months, and then sold it, he would have had a long-term capital gain or loss.	1. Permits the "tacking on" ing periods only where the asse capital asset. 2. Provides that delivery of futures contract does not start period but continues the old.
Bonds and other evidences of indebtedness (sec. 1232).	1. Gain realized from a corporate or government bond in registered form or with coupons attached is capital gain if bond (if a capital asset) is sold, exchanged, or held on retirement. Gain on retirement of non-coupon, non-registered bonds is ordinary income.	1. In case of bonds issued a 1955, capital gain treatment o extended to non-coupon, non-r (if capital assets).

se	Senate	Conference
losures by creditors of for a debt are treated ith the creditor taking e basis of the indebted- creditor is not realized ne foreclosed property	Restores prior law.	Senate action.
ge of: A life policy for owment or annuity; an another endowment or for an annuity. The taxpayer will take the changed, with adjust- nts accompanying the	Restricts tax free exchange of endowment policies to cases where policy received has no later maturity.	House provision with Senate modification.
ne new corporate reor- omits section 112 (b)	Restores section 112 (b) (2) in conformity with general revision of the corporate reorganization changes.	Senate provision.
counts from the defini- hereby providing ordi- atment where such an or exchanged. This is nent applicable if the until maturity.	1. House provision with technical amendments.	1. House provision with technical amendments made by Senate.
ic exception to the cap- respect to such bonds , 1954.	2. Restores prior law.	2. Senate action.
ing on" of two hold- the asset given up is a	1. House provision but provides further that the asset given up may be a depreciable asset used in trade or business.	1. House provision with Senate amendment on depreciable asset used in trade or business.
very of a commodity ot start a new holding old.	2. House provision.	2. House provision.
ssued after January 1, ment on retirement is , non-registered bonds	1. House provision with technical amendments.	1. House provision with technical amendments made by Senate.

Item	1939 Code	House
	2. Nonregistered bonds may be put in registered form at any time prior to retirement in order to obtain capital gain treatment on retirement.	2. With respect to bonds issu uary 1, 1955, provides that non-r must have been converted prio 1954, in order to get capital gai retirement.
	3. It is uncertain whether the interest element in bonds originally issued at a discount constitutes ordinary income or capital gain on sale, exchange, or retirement of the bond.	3. Provides, with respect to after January 1, 1955, new treat recovery of original issue disco ordinary income. If a discoun over six months and sold prior pro rata portion of gain repres issue discount is taxed as ordin excess is taxed as capital gain.
	4. An "artificial" discount in the hands of the purchaser can be created by selling a bond with a number of coupons detached, thereby depressing the price of the bond until the period to which the coupons relate has expired. If the bond is sold at the conclusion of such period, it is arguable that the gain is capital gain.	4. Continues prior law.
Short sales (sec. 1233).	1. A short sale always results in a capital gain or loss. Therefore, a dealer in commodities or securities can obtain long-term capital gains treatment by selling his stock in trade short rather than by selling it outright.	1. To prevent tax avoidance gain or loss from a short sale de nature of the asset used to close
	2. Any period in which a taxpayer is both long and short with respect to substantially the same investment does not count as part of the holding period. A short sale is defined to include a "put" (an option to sell an asset at a fixed price) for this purpose.	2. "Puts" purchased with st hedge against a decline in value the definition of short sale.
Options to buy or sell (sec. 1234).	If an option is sold, the holder (unless a dealer in options) realizes long- or short-term gain or loss depending on how long he holds the option. In the case of failure to exercise an option, the holder always realizes a short-term capital loss and the grantor a short-term capital gain.	Provides consistent treatment on both sale or failure to exer the case of the holder, treatment or ordinary income depends on the underlying property to wh relates is a capital asset; the g ways receive ordinary income on cise an option. This applies in a covered by the new Code.
Sale or exchange of patents by the inventor (sec. 1235).	Amateur, as distinct from professional, investors obtain capital gains treatment on proceeds of the sale of a patent or invention. Present law unclear with respect to whether a transaction providing for royalty payments represents a sale or exchange and, therefore, whether capital gains treatment or ordinary income treatment is applicable to proceeds of such sales.	Extends capital gains treatm realized by an inventor, regard amateur or professional, on the s of a patent where the seller ret in the patent, except to the exte chase price may be related to th use or disposition of the pat within a period of 5 years from or exchange, and the entire p ceived within a period of 5 yea

use	Senate	Conference
nds issued before Jan- at non-registered bonds ted prior to March 1, pital gain treatment on	2. House provision with technical amendments.	2. House provision with technical amendments made by Senate.
spect to bonds issued ew treatment to tax the ie discount (if any) as discount bond is held ld prior to maturity, a n representing original is ordinary income and gain. r.	3. House provision with technical amendments.	3. House provision with technical amendments made by Senate.
	4. Provides new rule to tax "artificial" discount, created by detaching excess coupons, as ordinary income.	4. Senate provision.
voidance, provides that t sale depends upon the to close the sale.	1. House provision.	1. House provision.
with stock in order to in value not included in ale.	2. House provision.	2. House provision.
eatment for gain or loss to exercise options: in reatment as capital gain ends on whether or not y to which the option t; the grantor will al- come on failure to exer- plies in all taxable years e.	House provision.	House provision.
s treatment to proceeds , regardless of whether on the sale or exchange eller retains no interest the extent that the pur- ted to the productivity, the patent transferred rs from the date of sale entire proceeds are re- of 5 years.	Substitutes entirely new section assuring capital gain treatment to inventors making sales of all rights to patents, regardless whether the purchase price takes the form of royalty payments. Deletes 5-year limitation and extends the benefits of the section to individuals making financial contributions toward development of the patent before the invention is reduced to practice.	Senate provision with a clarifying amendment to assure this treatment to a sale prior to issuance of patent.

Item	1939 Code	House
Investment account of real estate dealers (sec. 1237, House bill).	Results in uncertainty in distinguishing between real estate held by real estate dealers for sale to customers (which results in ordinary gain when sold) and real estate held for investment (which results in capital gain when sold).	Provides that all such gain, e attributable to the effort of t the property (5 percent of sa expenses), will be treated as ca the property is especially ide dealer makes no substantial i the property and (3) the pro years. This section is limited
Sale of subdivided real estate (sec. 1237.	An individual who subdivides real property held for investment purposes is likely to be considered a dealer solely on account of such subdivision activity and be subjected to ordinary income tax rates on the entire long-term gain.	Provides that an individual, dealer, subdividing real estate come from sales as capital gai the taxpayer must have held th years and have made no subs ment. If so, the first five sales gain treatment and, in the ye is made, such treatment conti 5 percent of the sale proceeds treated as ordinary income.
Private annuities (sec. 1241 of House bill).	Private annuities involve an exchange of property for a promise of the buyer to pay a life income. The tax treatment of these transactions is in an uncertain status due to conflicting court decisions, particularly relating to the time the transaction is taxable, problems of basis and treatment of mortality gain or loss.	A capital gains tax is impo of the property in the year of excess of the value of the an consideration, over his basis The seller thereafter pays tax annuity rule, using the value determine his exclusion. Also basis for the property acquire by the value of the annuity. tality gain or loss to him resu justment to the property (or loss after property has been di
Taxability to employee of certain termination payments (sec. 1240).	Provides that amounts received by an individual (employed for 20 years) in exchange for his rights to receive after retirement (for a period of at least 5 years or until death) a percentage of his employer's profits, are to be treated as long-term capital gains, if he has had a right to a percentage of profits for at least 12 years and if the amount received in exchange for such percentage is received in one taxable year after the individual's retirement.	Omits section.
Cancellation of lease or distributor's agreement (sec. 1241).	Generally treats amounts received by lessee or distributor in exchange for cancellation of lease or franchise as a sale or exchange (thus giving rise to capital gain if lease or franchise is a capital asset); however, some doubt has been thrown on this proposition by a recent court decision.	Continues prior law.
Compensation from employment and income from an invention of artistic work (secs. 1301, 1302).	Allows income received from inventions or artistic work to be spread back over a 36-month period if the work performed by the taxpayer covered 36 months or more and if 80 percent of the income is received in a single year (sec. 107).	Increases from 36 to 60 mo over which income from an i spread back.

ouse	Senate	Conference
n gain, except an amount ort of the dealer selling nt of sales proceeds less ed as capital gain if (1) ally identified, (2) the antial improvements in the property is held 5 limited to individuals.	Eliminates entire section and returns to prior law.	Senate action.
ividual, not otherwise a l estate may report in- pital gains. In general, held the property for 5 no substantial improve- ve sales are given capital the year the sixth sale nt continues except that proceeds less expenses is ome.	House provision with modification relating to "substantial improvements": Rules are provided where the improvement is not made by the taxpayer and in certain cases, improvements required by local market conditions will not disqualify the sale from capital gain treatment.	House provision as amended by the Senate, with technical amendments and with the further provision that the Senate amendment relating to improvements required by market conditions apply only where property is held over 10 years.
is imposed on the seller year of exchange on any the annuity, plus other s basis of the property. pays tax under the new value of the annuity to n. Also, the purchaser's acquired is determined nuity. Later, any mor- im results in a basis ad- rty (or capital gain or been disposed of).	Eliminates entire section and returns to prior law, as otherwise modified by new Code.	Senate action.
	Restores section but only with respect to contracts entered into before date of enactment of this bill.	Senate action.
	Provides that amounts received by a lessee for the cancellation of a lease or by a distributor on the cancellation of a distributorship agreement (if he has a substantial capital investment in the distributorship) shall be treated as received on a sale or exchange.	Senate provision.
o 60 months the period om an invention may be	Retains House provision but reduces from 36 to 24 months the period during which work must be performed by taxpayer on an invention or artistic production in order to qualify for spread back of income. An individual is deemed to have been a member of a partnership for any period immediately prior to becoming a partner in which he was an employee, if during the current year he receives compensation attributable to a job on which he worked as an employee.	House provision with Senate modifications.

Item	1939 Code	House
Circumstances of adjustment (secs. 1311–1315).	Allows a tax adjustment as to an item in a closed taxable year where either the taxpayer or the Government has treated the same item inconsistently in an open taxable year (sec. 3801).	Retains existing provision, cedure for obtaining adjustme justment where closed taxabl net operating loss.
Involuntary liquidation of LIFO inventories (sec. 1321).	Permits a retroactive adjustment to income of an earlier year in which LIFO inventory was involuntarily liquidated. Liquidation must have occurred in taxable years ending after June 30, 1950, but ending prior to Jan. 1, 1954, and must be replaced in a subsequent taxable year ending before Jan. 1, 1956.	Extends period during w liquidations may occur 1 year years ending before Jan. 1, 19
Computation of tax where taxpayer restores substantial amount taxable status (secs. 1351, 1361).	Repayments of amounts mistakenly received and included in income in an earlier year are deductible only in the year of repayment.	Repayments in excess of retroactively excluded from earlier year or deducted in th tion, whichever produces th the taxpayer. Does not appl of inventory sales.
Election of certain corporations and unincorporated businesses as to taxable status (secs. 1351, 1361).	1. Provides no election for corporations to be taxed as partnerships.	1. Continues prior law.
	2. Provides no election for proprietorships or partnerships to be taxed as corporations.	2. Continues prior law.
CHAPTER 6. CONSOLIDATED RETURNS (SECS. 1501–1733)		
	1. Detailed rules for consolidated returns prescribed by regulations.	1. Inserts existing regulati priate minor changes into sta
	2. Imposes 2 percent additional tax on income of affiliated group filing a consolidated return.	2. Continues prior law.
	3. Corporations may elect to join in a consolidated return if they meet a 95-percent affiliation test.	3. Reduces affiliation test to
	4. Consolidated groups not subject to tax on intercorporate dividends (after 85 percent allowance) paid by one member to another.	4. Provides specific alternat cating earnings and profits a an affiliated group for purpos liability.
	5. An election to file on a consolidated basis must be continued, until a change in the tax law affecting the advantage of consolidated returns or in the membership of the affiliated group occurs, when a new election is permitted.	5. Makes clear that any a tion in the tax law provides a respect to consolidated filing.

House	Senate	Conference
ovision, but simplifies pro-adjustment and allows ad-l taxable year involved a	Retains House provision with technical amendments.	House provision with Senate modifications.
uring which involuntary r 1 year to include taxable an. 1, 1955.	House provision.	House provision.
cess of $3,000 must be ed from income in the ed in the year of restitu-luces the best result for not apply to adjustments	Clarifies exception for inventory adjustment so that refunds made by a regulated public utility and required to be made by the regulatory body will qualify for the benefits of this provision.	House provision as modified by Senate with technical amendment.
law.	1. Provides an election for domestic corporations with the following characteristics to be taxed as partnerships: (a) organized after Dec. 31, 1953; (b) 10 or fewer shareholders all actively engaged in the business; (c) one class of stock outstanding. All shareholders must consent to the election which is binding unless ownership changes 20 percent or more.	1. Rejects Senate amendment and continues prior law.
law.	2. Provides an election for proprietorships or partnerships with 50 or less members to be taxed as domestic corporations. Capital must be an income-producing factor, or 50 percent or more of income must be derived from selling property or from brokerage commissions. Personal-holding company income is excluded from corporate tax treatment. Election is irrevocable unless membership changes 20 percent or more.	2. Senate provision with technical modifications.
regulations with appro-into statute. law.	1. Deletes House provision and restores prior law. 2. Eliminates 2 percent tax on consolidated returns filed by regulated public utilities.	1. Continues prior law. 2. Senate provision.
n test to 80 percent.	3. Deletes House provision and restores prior law.	3. House provision.
alternative rules for allo-rofits among members of purposes of sharing tax	4. Deletes House provisions and restores prior law.	4. House provision.
t any automatic expira-vides a new election with d filing.	5. Deletes House provision and restores prior law.	5. Continues prior law.

Item	1939 Code	House
Corporations — Disallowance of minimum exemption and credit (sec. 1551).	Under section 15 (c) of the 1939 Code, if a corporation transfers property (other than money) to another corporation which it controls and which was created or utilized for the purpose of receiving the transferred property in order to obtain either an additional $25,000 minimum surtax exemption or an additional $25,000 minimum excess profits credit, the benefit of the additional exemption or credit is disallowed to the transferee corporation. The provision does not apply with respect to taxable years beginning after December 31, 1953.	Extends this provision indefi plies it to the $30,000 accumu credit provided by the House bi with the tax on accumulated ear
SUBTITLE B—ESTATE AND GIFT TAXES		
CHAPTER 11—ESTATE TAX		
Combining the basic and additional taxes (secs. 2001 and 2011).	Estate tax liability is computed by first determining a "tentative tax" from two separate schedules. Then, if the estate is over $100,000 a "basic estate tax" is computed and 80 percent of this represents the maximum credit allowed for State death taxes.	Eliminates the necessity of s puting the basic tax by expressin credit allowable for State death cent of the rates applicable to th of the decedent. This simplifi not change the tax liability or th for State death taxes in the cas or resident of the U. S.
Credit for tax on prior transfers (sec. 2013).	There is allowed a deduction for property received from a prior decedent (or by a gift subject to tax) within 5 years of the current decedent's death. The deduction is allowed for the value of the property of the donor or prior decedent still in possession of the current decedent at the time of his death (or property which can be traced as having been acquired in exchange for such property) and is independent of the amount of the tax paid on the prior transfer. No deduction is allowed for transfers from a spouse.	Allows a credit for the tax pa erty in the estate of the prior can never be larger than the tax the property in the estate of cedent. To eliminate tracing the credit is based upon the val erty at the time of the death cedent. The credit is to be allo two years following the death cedent and then decreases by 2 two years thereafter until no c after the 10th year. The cre for transfers from spouses wh deduction is not applicable.
Alternate valuation (sec. 2032).	The executor is permitted, if he so elects upon his return, to value the property included in the gross estate as of a date one year after the decedent's death or in the case of such property distributed, sold, exchanged, or otherwise disposed of at an earlier date, the value of such at the date of disposition.	The exercise of such an electi cases where the value of the declined within one year afte death to 66⅔ percent of its valu the decedent's death.
Transfer taking effect at death (sec. 2037).	Property transferred during lifetime (and after October 8, 1949) by a decedent is includible in his gross estate if possession or enjoyment of the property can be obtained only by surviving him. This rule applies even though the decedent has retained no interest in the property.	Property transferred during after October 8, 1949) by a d includible in his estate only if death a reversionary interest exceeding 5 percent of the val erty. This rule operates wheth ary interest is express or by ope

ıse	Senate	Conference
on indefinitely and ap- accumulated earnings House bill in connection ated earnings.	House provision but increases the amount of the accumulated earnings credit to $60,000 to conform to Senate action with respect to the tax on accumulated earnings.	House provision with Senate modification.
ity of separately com- xpressing the maximum te death taxes as a per- ble to the taxable estate simplified method does ity or the credit allowed the case of any citizen	House provision.	House provision.
e tax paid on the prop- e prior decedent but it the tax attributable to ate of the current de- racing of the property the value of the prop- death of the prior de- be allowed in full for death of the prior de- ses by 20 percent every til no credit is allowed The credit is available uses where the marital able.	Expands House provision to include property passing as a result of the exercise or non-exercise of a power of appointment and to provide that *inter vivos* taxable transfers to a person who pre-deceased the transferor by less than two years may qualify. The provisions of the House bill relating to the rules under which property is valued for purposes of computing the credit and the limitation of the credit are stricken and new rules are inserted based on the principles established under the estate tax marital deduction.	House provision with Senate addition.
an election is limited to of the gross estate has ar after the decedent's its value at the date of	Restores prior law.	Senate action.
during lifetime (and by a decedent will be only if he retained at nterest in the property the value of the prop- s whether the reversion- by operation of law.	House provision	House provision.

Item	1939 Code	House
Annuities (sec. 2039).	The value at the decedent's death of a joint and survivor annuity purchased by him is includible in his gross estate. It is not clear whether an annuity purchased by the decedent's employer or an annuity to which both the decedent and his employer contributed is includible in the decedent's gross estate.	A joint and survivorship an ble in the gross estate to the ex cedent contributed to its cost pose of determining the extent contribution the payments m ployer under an unqualified pla into account. However, unde sion and profit sharing plans contributions are not to be cons been made by the decedent. T generally applicable to estates ing after the enactment of the
Proceeds of life insurance (sec. 2042).	Life insurance proceeds of a decedent are subject to the estate tax if the proceeds of the policy are payable to the executor, if the decedent directly or indirectly paid the premiums on the policy or if the decedent possessed any incidents of ownership in the policy at the date of his death.	Life insurance proceeds are decedent's estate if the policy or payable to his executor but has been removed. A 5-perc interest rule similar to that ap transferred property is also a insurance.
Expenses, indebtedness, and taxes (sec. 2053).	Funeral expenses, administration expenses, claims against the estate and unpaid mortgages are deductible in computing the taxable estate, but are limited to those expenses allowable by the laws of the jurisdiction under which the estate is being administered and cannot exceed the value of the property in the probate estate.	Expenses in connection wit jected to the estate tax alth probate estate are to be allow if the expenses are of the type allowed as deductions if the the probate estate and they the period provided for the a estate tax. Also expenses o property included in the proba allowed without regard to the tate if they are paid prior to t for the filing of the estate tax
Transfers for public, charitable or religious uses (sec. 2055).	1. Bequests to or for the use of any veterans' organization are not specifically allowable deductions from the gross estate.	1. Continues prior law.
	2. Property passing to charity by virtue of renunciation before date prescribed for filing estate tax return qualifies for charitable deduction.	2. Continues prior law.
Marital deductions (sec. 2056).	1. The marital deduction is allowed for property placed in trust passing to surviving spouses if there is a right to income from all the property and a general power of appointment over all the property. It is not clear when a legal life estate qualifies as a trust under the law of various States nor is it clear whether a legal life estate coupled with a power to consume property qualifies the property for the marital deduction.	1. The trust requirements eliminated and if the spouse come over a specific portion plus a power of appointment will qualify that part for the m
	2. Amounts paid to a widow pursuant to a court order for support when the estate is in administration are eligible for the marital deduction if such payments do not constitute a "terminable interest".	2. The "terminable interest" cable to all amounts paid to a to State law for her support w decedent's death.

ouse	Senate	Conference
rship annuity is includi- o the extent that the de- its cost and for the pur- e extent of the decedent's ients made by the em- ified plan are to be taken er, under qualified pen- ng plans the employer's be considered as having dent. The new rules are estates of decedents dy- t of the bill.	House provision but applies the new rules, insofar as they relate to the treatment of employer's contributions under a qualified plan, to estates of decedents dying after December 31, 1953.	House provision with Senate modifications.
eds are includible in the policy is owned by him tor but the premium test 5-percent reversionary that applicable to other s also applicable to life	House provision.	House provision.
tion with property sub- ax although not in the e allowed as deductions the type which would be if the property were in d they are paid within or the assessment of the enses of administering e probate estate are to be d to the total probate es- rior to the time provided ate tax return.	House provision.	House provision.
w.	1. Provides that bequests to or for the use of any veterans' organization incorporated by acts of Congress are allowable deductions from the gross estate.	1. Senate provision.
w.	2. Extends provision to include as a renunciation the termination of a power of appointment.	2. Senate provision with technical modification.
ements of prior law are spouse has a right to in- portion of the property ntment over such part it or the marital deduction.	1. House provision.	1. House provision.
interest" rule is inappli- aid to a widow pursuant pport within one year of	2. Deletes House provision	2. Senate action.

Item	1939 Code	House
Stocks situated in the United States (sec. 2104).	Stock held by nonresident aliens is treated as property situated in the United States if it is stock of a domestic corporation regardless of where the certificates are located, and if it is stock of a foreign corporation, if the certificates are located in the United States.	Retains only the first of these to be deemed to be situated in the only where it is stock of a domesti
Members of the Armed Forces dying as a result of service in a combat zone (sec. 2201).	Members of the Armed Forces dying in a combat zone or from wounds or disease in a combat zone before January 1, 1955, are exempt from the additional estate tax.	Extends this exemption to cov in which persons are generally duction under the Universal Mili and Service Act.
CHAPTER 12—GIFT TAX		
Nonresident aliens (sec. 2501).	In the case of nonresident aliens the gift tax is imposed on all gifts of property situated within the United States at the time of gift.	In the case of nonresident a engaged in business in the Unite tax is imposed with respect to gif situated in the United States. all other nonresident aliens the posed only with respect to tang situated in the United States.
Taxable gifts (sec. 2503).	1. A $3,000 annual exclusion is available if the gift is not a future interest. It is not clear whether a gift to a minor in trust or through a guardian can be made other than as a future interest. 2. In the case of the gift of a present interest in property coupled with a future interest, such as the power of a trustee to terminate the trust and make immediate distribution to the life tenant, the present interest might be held to have no value since the exercise of the power could result in its immediate termination although such termination would increase rather than decrease the value of the present interest. As a consequence the $3,000 annual exclusion would not be allowed.	1. Gifts to minors will not gifts of future interest if the inc erty can be spent by or for the ch attaining age 21 and if not so s the child when he reaches age 2 appoint by will. 2. Continues prior law.
Revaluation of gifts for prior years (sec. 2504).	Due to the cumulative nature of the gift tax and the progressive gift tax rates the tax liability for gifts in a particular year is dependent on the correct valuation of gifts in prior years. Consequently, a taxpayer's current gift tax liability might be dependent upon the correctness of the valuation made in the distant past and the statute of limitations does not prevent either the taxpayer or the Government from questioning the proper valuation of the earlier gift.	The value of a gift as reporte gift tax return for a prior year is as to the value of the gift after limitations has run in determini to be applied on subsequent gifts.
Gift of husband or wife to third party (sec. 2513).	Consent to treat gifts as made one-half by each spouse must be filed by March 15 of year following gift.	Continues prior law.

se	Senate	Conference
of these rules: stock is d in the United States domestic corporation.	House provision.	House provision.
n to cover any period nerally subject to in- rsal Military Training	House provision.	House provision.
sident aliens who are e United States a gift ct to gifts of property ates. With respect to ens the gift tax is im- to tangible property States.	Makes clarifying changes.	House provision with Senate modifications.
ill not be considered the income and prop- r the child prior to his not so spent passes to s age 21 or as he may .	1. Minor clarifying changes. The power of appointment is not limited to one exercisable by will.	1. House provision with Senate modifications.
	2. Provides that the value of the present interest is to be computed without regard to the effect of the power upon it if the power can be exercised only to increase the donee's present interest in the property.	2. Senate provision.
reported on a taxable year is to be conclusive ft after the statute of termining the tax rate nt gifts.	House provision.	House provision.
	Continues prior law.	Continues prior law (H. Con. Res. 268 changes date to April 15).

Item	1939 Code	House
Tenancies by the entirety (sec. 2515).	The creation of a tenancy by the entirety may result in a gift from one spouse to another at the time the tenancy is created. Moreover, the termination of the tenancy may also constitute a gift unless the proceeds are divided between the husband and wife.	Unless the spouse furnishing t of the consideration for the p otherwise, a transfer of real prop ancy by the entirety will not cons that time. However, when such terminated other than by death sidered as occurring at that time the proceeds distributed to eith ceed the proportion of the consi inally furnished by such spouse.
Property settlements incident to divorce (sec. 2516).	Property settlements between spouses are not regarded as taxable gifts if the property settlement is incorporated in the divorce decree. However, the gift tax status of settlements not incorporated in a divorce decree is uncertain.	Property settlements involving tween spouses will not constitut lowed by a divorce within a reaso
Marital deduction (sec. 2523).	It is not clear whether the transfer to a spouse of a legal life estate coupled with a general power of appointment is eligible for the marital deduction. Problem is similar to that described above in item (1) under marital deduction for estate tax.	A transfer to a spouse of a le coupled with a general power o is eligible for the marital deduct gift tax. Solution is similar to with respect to item (1) under m tion for estate tax.
SUBTITLE D—MISCELLANEOUS EXCISE TAXES		
CHAPTER 33—FACILITIES AND SERVICES		
Exemptions from admissions tax (sec. 4233).	Admissions for benefit of certain listed organizations are exempt from tax.	Continues prior law.
SUBTITLE E—ALCOHOL, TOBACCO AND CERTAIN OTHER EXCISE TAXES		
CHAPTERS 51 AND 52, ALCOHOLIC BEVERAGES AND TOBACCO		
General: Payment of tax (secs. 5061, 5703).	Taxes paid prior to withdrawal of products by purchase of stamps.	Taxes to be paid by return. instituted at such time after Ja as Secretary shall decide.
Strip stamps (secs. 5008, 5009, 5055, 5703).	Liquor tax payment indicated by strip stamps on each container. Cost to producer, 1 cent per stamp.	Continues prior law with res stamp provisions. Secretary ma stamps for tobacco and beer when is instituted. Tobacco and beer sold at cost of preparation.

se	Senate	Conference
ishing the major part the property elects eal property to a ten- not constitute a gift at ien such a tenancy is y death a gift is con- hat time to the extent to either spouse ex- ne consideration orig- spouse.	In addition, applies the House provision to the creation by husband and wife of a joint tenancy with right of survivorship in real property.	House provision with Senate modifications.
nvolving transfers be- onstitute gifts if fol- a reasonable time.	House provision with the requirement that the divorce must occur within 2 years after the settlement.	House provision with Senate modification.
of a legal life estate power of appointment l deduction under the nilar to that provided under marital deduc-	House provision.	House provision.
	Adds to the exemptions: (1) Admissions to athletic games between teams composed of college students if the entire proceeds inure to the benefit of a hospital for crippled children; (2) admissions to baseball games if all the players have amateur or semiprofessional status and if (a) the game is not primarily conducted for profit, and (b) no part of the net earnings inures to the benefit of any private stockholder or individual; and (3) admissions to a rodeo or historical pageant if the proceeds are used exclusively for improvement, maintenance, and operation of such rodeo or pageant and if no part of its net earnings inure to the benefit of any private stockholder or individual.	Senate provision.
eturn. Returns to be fter January 1, 1955,	House provision.	House provision.
vith respect to liquor tary may require strip eer when return system nd beer stamps to be n.	House provision except that stamps to be furnished without cost to producers.	House provision with Senate modification.

Item	1939 Code	House
Penalties (secs. 5601–5693, 5761–5763).	Some penalty sections set both maximum fines and sentences and mandatory minimum fines and sentences.	Removes mandatory minimum r
Distilled spirits: Voluntary destruction (sec. 5011).	Tax collected on spirits voluntarily destroyed prior to withdrawal from bond unless they are unfit for beverage purposes.	Permits voluntary destruction v ment of tax prior to withdrawal fr
Other businesses (sec. 5171).	Only operations connected with production of distilled spirits allowed to be conducted on distillery premises.	Allows distillers to conduct oth except certain specifically prohibite on premises when authorized by Se
Registration of stills (sec. 5174).	All stills (except stills for refining petroleum) required to be registered.	Requires registration only for st to be used for distillation or rec tilled spirits.
Fermented malt beverages: Bottling of soft drinks (secs. 5411, 7851).	Only breweries which on June 26, 1936, were bottling soft drinks allowed to carry on such business.	Provides that all breweries ma drinks, on and after January 1,
Voluntary destruction and casualty losses (sec. 5057).	No credit or refund allowed to brewer for tax paid on beer belonging to him which is lost by casualty or returned to brewery for reconditioning or destruction.	Provides that credit or refund brewer for tax paid on beer belo which is returned to brewery for ing, use as materials, or is dest supervision, or which is lost by ca than by theft) and for which brew demnified by insurance or otherwi
Sake (sec. 5052).	Sake classified as beer.	Provides that sake be classified
Wines: Other businesses (sec. 5361).	Bonded wine cellars not permitted to be used for other businesses.	Permits bonded wine cellars to other businesses if they will not j revenue. Examples of possible fruit juices and jellies.
Treatment (sec. 5382).	Wine may be corrected and stabilized only through use of "usual cellar treatment."	Permits methods of "good com tice" to correct and stabilize wine.
Bottling of taxpaid wine (sec. 5352).	Government cannot supervise bottling of taxpaid wine.	Provides for taxpaid wine bottl operate under Government super
Voluntary destruction and casualty losses (secs. 5370, 5371).	Nonpayment of tax on losses while in bond allowed at discretion of Commissioner. Tax has been waived only on destruction of wine unfit for use as wine.	Provides that voluntary destruc without payment of tax be permi bond. No tax to be required i losses while in bond, except where occurs because of negligence or claimant is indemnified by insura wise.
Refunds on unmerchantable sparkling wines (sec. 5044).	No provision for refund or credit on taxpaid wine returned to bonded premise.	Authorizes refund or credit o merchantable sparkling wine whe bonded premise.
Taxable unit for sparkling wines (sec. 5041).	Sparkling wines taxed on basis of each one-half pint or fraction thereof in each container.	Changes tax basis to wine gallo time of withdrawal from winery rates to practical gallon equiv rates. (One wine gallon=20 hal

	Senate	Conference
imum requirements.	House provision.	House provision.
uction without pay-awal from bond.	House provision.	House provision.
luct other businesses, prohibited businesses, ed by Secretary.	House provision.	House provision.
ly for stills intended or recovery of dis-	House provision.	House provision.
eries may bottle soft uary 1, 1955.	Makes effective date of change the day after date of enactment of the Act.	House provision with Senate modification.
refund be allowed to eer belonging to him very for recondition- is destroyed under st by casualty (other hich brewer is not in- otherwise.	House provision.	House provision.
assified as a wine.	Restores prior law.	Senate action.
ellars to be used for ill not jeopardize the ossible uses, making	House provision.	House provision.
od commercial prac-ze wine.	House provision.	House provision.
ne bottling houses to t supervision.	House provision.	House provision.
destruction of wine e permitted while in uired in case of all t where loss by theft ence or collusion or insurance or other-	House provision.	House provision.
redit of tax on un-ine when returned to	House provision.	House provision.
e gallon measured at winery and changes equivalent of old =20 half pint units.)	House provision.	House provision.

Item	1939 Code	House
Wines—Continued Hard cider (sec. 5042).	Sale of hard cider by farmers at roadside stands in uncertain tax status. Internal Revenue has not attempted to collect tax thereon.	Specifically exempts such cide preserved by any process and is n sale as wine.
Tobacco products: Sizes of packages (sec. 5723).	Permitted sizes of packages and wording of labels specified in the law.	Repeals detailed statutory pro
Records (sec. 5741).	Details of records and reports specified in the law.	Provides that required records b regulations.
Permits (secs. 5712, 5713).	Manufacturers and dealers must register before commencing business.	Provides that every person bef ing business as a manufacturer permit to engage in business. P denied or revoked for cause.
Voluntary destruction and casualty losses (sec. 5705).	Refund of tax given to manufacturer on articles withdrawn from market. Court decisions interpret this to include loss by casualty (other than theft) while taxpaid articles are still in possession of the manufacturer.	Provides credit or refund of facturer for taxpaid articles los (except theft) while in his possess
SUBTITLE F—PROCEDURE AND ADMINISTRATION		
Time of filing individual income tax returns, declarations of estimated income tax, and payment of estimated taxes (secs. 6015, 6072, 6073, 6074, 6151, 6153).		
Filing dates (secs. 6015, 6072–6074).	1. Filing date of final tax return and payment of tax due thereon is March 15 or 15th day of the third month after the individual income taxpayer's taxable year.	1. Filing date of final return a tax due thereon for individuals April 15 or 15th day of fourth m close of the taxpayer's-taxable y
	2. Filing date of first declaration of estimated tax and first installment payment by individuals is March 15.	2. First declaration filing date terly installment payment moved
	3. Farmers required to file declarations of estimated tax by Jan. 15 or final return by Jan. 31. Taxpayers other than farmers may file final return on or before Jan. 15 in lieu of final declaration of estimated tax.	3. Filing date for final return i ration by farmers moved to Febru
	4. Quarterly payments of estimated tax due on June 15, Sept. 15, and Jan. 15.	4. No change made in dates f 4th quarterly payments of estima
Declarations of estimated income tax by individuals (secs. 6015, 6073, 6153, 6654).	1. Filing requirements: Declarations of estimated tax required by individuals whose incomes are primarily from wages and salaries if gross income is expected to exceed $4,500 plus $600 for each exemption. Individuals with over $100 of income from sources not subject to withholding required to file declarations if gross income expected to exceed $600.	1. Filing requirements: For in no more than $100 from sourc wages and salaries, declaration re gross income is expected to be $ In the case of a married person, required unless combined incon and wife expected to exceed $1 requirement for head of family. For individuals with more th come not subject to withholdi required only if gross income exceed $400 plus $600 per exemp

e	Senate	Conference
ch cider if it is not and is not offered for	House provision.	House provision.
ory provisions.	House provision.	House provision.
ecords be specified by	House provision.	House provision.
rson before commenc- acturer must obtain a ness. Permit may be se.	House provision.	House provision.
und of tax to manu- icles lost by casualty s possession.	House provision.	House provision.
eturn and payment of ividuals is moved to ourth month after the axable year.	1. House provision.	1. House provision.
ng date and first quar- t moved to April 15.	2. House provision.	2. House provision.
return in lieu of decla- to February 15.	3. House provision with respect to farmers. Filing date for final return in lieu of final declaration by individuals other than farmers moved to Jan. 31.	3. House provision with respect to farmers. Senate provision with respect to other individuals.
dates for 2d, 3d, and f estimated tax.	4. House provision.	4. House provision.
: For individuals with n sources other than ration required only if to be $5,000 or more. person, no declaration d income of husband ceed $10,000. Similar family. more than $100 of in- thholding declaration ncome is expected to r exemption.	1. House provision.	1. House provisions.

Item	1939 Code	House
	2. Penalties for underestimates and underpayments of tax: Where estimated tax is less than 80 percent (66⅔ percent for farmers) of actual tax liability, a charge of 6 percent of the amount by which final tax exceeds estimated tax is imposed. Where no declaration is filed or where no payment of an installment of estimated tax is made, a charge as high as 9 percent of unpaid installment may be imposed. No penalty imposed for underestimate where estimated tax is based on current year's exemption status and rates applied to previous year's income.	2. Penalties: Replaces presen and severe system of penalties tional charge of 6 percent per difference between the installm made and 70 percent (66⅔ perce of farmers) of quarterly instal the basis of the final return. No additional charge due wher as estimated tax is (a) same as p tax, (b) tax based on previous with current rates and exemptio 70 percent (66⅔ percent in the ca of estimated tax computed by pr end of the year the income rece beginning of the year up to the m the installment is due. 3. Effective for taxable years b December 31, 1953.
Declarations of estimated income tax by corporations (secs. 6016, 6074, 6154, 6655).	1. No provision.	1. Filing requirements— Corporations with estimated excess of $50,000 for years be December 31, 1954.
	2. No provision.	2. Payment requirements— Installments of 5% of estim credits and $50,000 exemptio 15th day of 9th month and 15 month of taxable year. Instal age increases each year to 25% later years.
	3. No provision.	3. Penalties for failure to pay come tax— Additional charge of 6 perce computed for each installment ference between the amount pa cent of the amount which sho paid. No additional charge due paid is the required percentag vious year's tax less $50,000; puted on previous year's income rates and exemptions, less $50,0 70 percent of tax, less $50,000.
Time of filing gift tax returns and paying tax due thereon (secs. 6019, 6075, and 6151).	Due date of return and payment: March 15.	Due date of return and payme
Returns of information regarding payments of income (sec. 6041).	Persons making payments to other persons except corporations of $600 or more consisting of rent, salaries, wages, premiums, annuities, compensations, remunerations, emoluments, and other gains, profits and income required to file information returns. Information returns with respect to payments of interest could be required regardless of amounts paid.	No comparable provision excep tions making payments of inter quired by regulations to file infor

e	Senate	Conference
present complicated nalties with an addi- nt per annum on the installment payment ⅔ percent in the case y installment due on rn. ue where amount paid ame as previous year's revious year's income emptions, (c) at least n the case of farmers) d by projecting to the me received from the to the month in which	2. House provisions, and also provides that no additional charge will be imposed where amount paid as installment, together with previous installment payments, is equal to 90 percent of tax on the income received from the beginning of the year up to the month in which installment is required to be paid as if that were a full year's income.	2. House provisions and provision added by the Senate.
years beginning after	3. Effective for taxable years beginning after December 31, 1954.	3. Senate provision.
— timated tax liability in years beginning after	1. Filing requirements— Corporations with estimated tax liability in excess of $100,000 for years beginning after December 31, 1954.	1. House provision as modified by the Senate.
nts— of estimated tax (less emption) payable on and 15th day of 12th Installment percent- r to 25% in 1959 and	2. Payment requirements— House provision except that exemption is $100,000 instead of $50,000.	2. House provision as modified by the Senate.
e to pay estimated in- f 6 percent per annum, allment date on the dif- nount paid and 70 per- hich should have been	3. House provisions but adds provision that no additional charge will be imposed where the estimated tax installment is equal to or exceeds 70 percent of the tax for the taxable year less $100,000 computed by placing on an annualized basis the taxable income for a preceding period, by providing that the income to be annualized may be either for the months in the taxable year ending before the month in which the installment is required to be paid, or the period ending 2 months before that month, whichever results in no additional charge.	3. House provisions with modifications and additions by Senate.
ge due where amount ercentage of (a) pre- 50,000; (b) tax com- s income using current ess $50,000; (c) at least 50,000.		
l payment: March 15.	Due date of return and payment: April 15.	Senate provision.
on except that corpora- of interest may be re- le information returns.	Adds provision that persons, engaged in a trade or business, making payments in the course of such trade or business to other persons except corporations of $600 or more consisting of rent, salaries, wages, premiums, annuities, compensations, remunerations, emoluments, and other gains, profits and income, are required to file information returns.	House provision with Senate addition.

Item	1939 Code	House
Signing of corporation returns (sec. 6062).	Signature on corporation income tax returns: Two officers—(1) president, vice president, or other principal officer, (2) treasurer, assistant treasurer, or chief accounting officer. Generally, with respect to other returns, the signature of one officer is sufficient.	Signature on all corporat One officer—president, vi urer, assistant treasurer, ch cer, or any officer duly auth
Advance payment of proposed deficiency (sec. 6213).	No comparable provision.	Payment of a proposed made to stop the running losing right to petition Tax
Payment by check or money order (secs. 6311, 6657).	1. Only certified cashiers' and treasurers' checks drawn on national and State banks and trusts companies, and United States postal, bank, express, and telegraph money orders could be used in payment for stamps. 2. No comparable provision.	1. To the extent provided type of check or money ord in payment of any tax or 2. Provides a 1-percent pe bad check or money order i or for stamps. This penalt the person tendered the chec with reasonable cause to belie upon presentment.
Payment by foreign currency (sec. 6316).	No comparable provision.	No provision.
Disclosure of amount of outstanding lien (sec. 6323).	No comparable provision.	When a notice of lien has standing liability at any tim to persons having a legitima amount of the outstanding
Sale of perishable goods (sec. 6336).	Provisions for special disposition of perishable goods are provided only in the case of forfeited goods.	Provides for special dispo goods seized by levy.
Limitations on assessments (and collection without assessment) (sec. 6501).	1. 3 years in the case of income, estate, and gift taxes and 4 years in the case of all other taxes. 2. 5 years in the case of the omission of 25 percent of gross income. 3. Where a corporation makes no return but each shareholder includes his distributive share in his return the tax of the corporation must be assessed within 4 years from the last date any shareholder filed his return.	1. Adopts a uniform 3-yea 2. Adopts a 6-year perio similar rule for estate and g gross income. This provisi if disclosure of the natur omitted items is made on th 3. If a corporation in goo or partnership return such r running of the period of lim
Limitation on credit or refund (sec. 6511).	Claim must be filed for income tax within 3 years from the time the return was filed or 2 years from the time the tax was paid, whichever is the later; for estate and gift tax 3 years from the time the tax was paid; and for all other taxes 4 years from the time the tax was paid.	Extends the income tax to all taxes, except stamp tax must be filed within 3 years tax was paid.

House	Senate	Conference
orporation returns: dent, vice president, treas- urer, chief accounting offi- ly authorized to sign.	Signature on all corporation returns: House provision.	Signature on all corporation returns: House provision.
oposed deficiency may be nning of interest without on Tax Court.	House provision.	House provision.
ovided by regulations, any ney order may be received tax or for any stamp.	1. House provision.	1. House provision.
rcent penalty for giving a order in payment of taxes penalty does not apply if the check in good faith and e to believe it would be paid	2. House provision.	2. House provision.
	The Secretary in his discretion and by regulations may allow payment of taxes in the currency of a foreign country.	Senate provision.
lien has been filed, the out- any time may be disclosed egitimate interest as to the anding liability.	House provision.	House provision.
al disposition of perishable y.	House provision.	House provision.
rm 3-year rule for all taxes.	1. House provision.	1. House provision.
ar period and provides a te and gift taxes. Defines provision will not apply e nature and amount of le on the return.	2. The 6-year period will not apply to estate and gift tax cases merely because of differences between the taxpayer and the Government as to valuation of property.	2. House provision as modified by the Senate.
in good faith files a trust n such return will start the d of limitations.	3. Adds provision that an information return filed by an organization which had supposed that it was tax exempt will also start the running of the period of limitations.	3. House provision and the provision added by the Senate.
me tax rule of prior law amp taxes for which claim 3 years from the time the	Adds provision that the 3-year period for filing claim will run from the due date of the return (determined without regard to any extension of time for filing).	House provision as modified by the Senate.

Item	1939 Code	House
Limitation on criminal prosecution (sec. 6531).	Generally, prosecution must be begun within 3 years after the offense. The period is 6 years for fraud, willful evasion of tax, willful aid in connection with a fraudulent return or document, and conspiracy to defeat or evade tax.	Changed from 3 years to 6 for prosecuting the offenses of to pay a tax or file a timely ta false statements or submitting intimidation of officers and United States, and various o by officers or employees of the
Failure to make deposit of taxes (sec. 6656).	No provision.	Imposes a penalty for fail sonable cause, to comply with ceipt system. The penalty is amount of the underpayment each month or part of a mo the underpayment continues, 6 percent in the aggregate. not be imposed for any period of the return with respect to is required to be made.
Interest on underpayment, nonpayment, or extensions of time for payment, of tax (sec. 6601).	Generally, interest is imposed at the rate of 6 percent per annum from the date prescribed for payment, or from the due date of the tax, to the date paid. In the case of deficiencies in income, estate, and gift taxes, interest is computed from the due date of the return to the date of assessment, and assessed as part of the deficiency. If payment is not made upon notice and demand, interest accrues on the total amount.	Provides for interest at the per annum from the due date for any amounts not paid; no est unpaid at any time. Th provided in prior law for certa has been retained.
Timely mailing treated as timely filing (sec. 7502).	No comparable provision.	Any claim, statement, or (except a tax return) receiv it is required to be filed will sidered as filed on time if the date on or before the due date.
Time for performance of acts where last day falls on Saturday, Sunday, or legal holiday (sec. 7503).	No comparable provision, except in the case of petitions to the Tax Court.	Extends the time for filing for performing any act, to t Saturdays, Sundays, or le determined in the District of place where the act is to be pe
EFFECTIVE DATES (SEC. 7851)		
Subtitle A—Income taxes.		Generally, applicable to beginning after December 31, after date of enactment of 195
Withholding of tax on nonresident aliens and foreign corporations and tax-free covenant bonds.		Applicable to payments ma of enactment of 1954 Code.
Subtitle B—Estate and gift taxes.		Applicable to estates of after enactment of 1954 Code.
		Applicable to gifts in calen subsequent years.
Subtitle C—Employment taxes.		Generally, applicable to r after December 31, 1954.

House	Senate	Conference
ears to 6 years the period lenses of willfully failing timely tax return, making bmitting false documents, rs and employees of the arious offenses committed es of the United States.	Extended the general period of limitation from 3 years to 5 years, but eliminated the extension to 6 years with respect to certain offenses as made in the House bill.	House provision.
for failure, without rea- ly with the depositary re- enalty is 1 percent of the ayment of the deposit for of a month during which ntinues, but not to exceed regate. The penalty will y period after the due date spect to which the deposit e.	House provision.	House provision.
st at the rate of 6 percent due date to the date paid paid; no interest on inter- me. The 4 percent rate for certain estate tax cases	House provision.	House provision.
ent, or other document) received after the date ed will generally be con- e if the postmark shows a lue date.	House provision.	House provision.
or filing any document or act, to the day following , or legal holidays, as strict of Columbia or the to be performed.	Defines "legal holiday" as a legal holiday in the District of Columbia or a statewide legal holiday, at the place where the act is to be performed.	House provision as modified by the Senate.
able to taxable years nber 31, 1953, and ending nt of 1954 Code.	House provision with modifications with respect to the specific application of certain sections.	House provision as modified by the Senate with further technical changes.
ents made after the date Code.	Applies to payments made after December 31, 1954.	Senate provision.
tes of decedents dying 54 Code.	House provision.	House provision.
in calendar year 1955 and	House provision.	House provision.
ble to remuneration paid 54.	House provision.	House provision.

Item	1939 Code	House
EFFECTIVE DATES (SEC. 7851)—Con.		
Subtitle D—Miscellaneous excise taxes.		January 1, 1955.
Subtitle E—Alcohol, tobacco, and certain other excise taxes.		January 1, 1955.
Subtitle F—Procedure and administration.		Generally, applicable after da to taxes imposed by the 1954 Co eral administrative provisions made applicable to taxes impose
Other provisions.		Provides that any provisio provided for will take effect o enactment of the 1954 Code. A the repeal of those provisions o not otherwise provided for, effe after enactment of the 1954 Co

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use	Senate	Conference
	House provision.	House provision.
	January 1, 1955, except that taxes on machine-guns and certain other firearms, the provisions of section 5411 relating to the use of breweries for producing and bottling soft drinks, and the provisions of section 5554 (relating to pilot plant operations), become effective on day after 1954 Code is enacted.	House provision as modified by the Senate.
after date of enactment 1954 Code. Many gen-ovisions of 1954 Code s imposed by 1939 Code.	Provides that the provisions of the 1954 Code relating to assessment (other than the provisions relating to deficiency procedures in the case of income, estate, and gift taxes), collection, and abatements, credits, and refunds shall become applicable to taxes under both the 1939 Code and 1954 Code on January 1, 1955, and that prior to such date the corresponding provisions of the 1939 Code shall remain in effect with respect to taxes under both the 1939 Code and the 1954 Code.	House provision as changed by the Senate.
rovision not otherwise effect on the day after ode. Also provides for isions of the 1939 Code for, effective on the day 1954 Code.	House provision.	House provision.